

SI-MNH-955a
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 13 July 1964 Total Minutes: 314 Total Miles 51

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>51</u>	<u>944</u>	<u>18.51</u>	<u>18.51</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
33	15	2	17	20 ^b	19	4	32	6.24	11.27	20	1.88	1.04	3.3	1.08	.63

III. Abundance of Tropicbirds:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>21</u>	<u>726</u>	<u>34.57</u>	<u>14.20</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
4	-	4	-	11	-	11	-	2.75	-	2.75	-	.21	-	.21	-

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.02</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>6</u>	<u>869</u>	<u>.12</u>	<u>4</u>	<u>825</u>	<u>.06</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 14 July 1964

Total Minutes: 789 Total Miles 125

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
60	196	3.27	1.57

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings			No. Birds			Birds/Sighting				Birds/Mile					
T	WT	P	B	T	WT	P	B	T	WT	P	B				
50	24	22	11	105	56	33	11	2.10	2.33	1.50	1.00	.84	.45	.26	.09

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
1	-	-	1	-	-	1.00	-	-	.01	-	-

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
11	87	7.91	.70

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	3	1.50	.02

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
4	1121	.03	2	102	.02

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 15 July 1964

Total Minutes: 774 Total Miles 145

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
45	190	4.22	1.81

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
44	8	34	-	152	23	63	-	3.15	2.88	1.85	-	1.05	.16	.43	-

III. Abundance of Tropicbirds:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	RT	WT		T	RT	WT		T	RT	WT		T	RT	WT	

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
3	38	12.69	.26

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
4	132	.03	2	117	.61

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 16 July 1964 Total Minutes: 754 Total Miles 140

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
44	171	3.89	1.22

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
41	11	27	-	117	64	44	-	2.83	5.82	1.63	-	.84	.46	.31	

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
4	34	13.50	.39

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
1	116	0\	1	116	0\

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SMITHSONIAN INSTITUTION
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AT SEA SURVEY CHART A

DATE: 17 July 1964

Total Minutes: 264

Total Miles 127

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
15	17	1.13	.13

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
14	5	6	-	16	5	6	-	1.11	1.00	1.00	-	13	14	15	-

III. Abundance of Tropicbirds:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	
1	1	-	1	1	-	1.00	1.00	-	10	10	1	-	-	-	

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
—	—	—	—

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
—	—	—	—

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
—	—	—	—

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
—	—	—	—	—	—

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 1964 Total Minutes: 777 Total Miles 137

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
44	285	6.43	2.02

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile					
T	WT	P	B	T	WT	P	B	T	WT	P	B			
46	6	36	-	199	164	31	-	4.98	10.67	3.64	-	1.45	17.36	-

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
3	3	-	2	3	-	1.00	1.00	-	0.02	0.02	-

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
3	81	27.00	0.59

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
4	225	103	4	225	103

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SMITHSONIAN INSTITUTION
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AT SEA SURVEY CHART A

DATE: 19 July 64 Total Minutes: 891 Total Miles 118

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>48</u>	<u>382</u>	<u>7.96</u>	<u>3.24</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile				
T	WT	P	B	T	WT	P	B	T	WT	P	B		
<u>40</u>	<u>12</u>	<u>25</u>	<u>-</u>	<u>185.71</u>	<u>65</u>	<u>-</u>	<u>4.13</u>	<u>3.92</u>	<u>2.60</u>	<u>-</u>	<u>1.37</u>	<u>.60</u>	<u>.55</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>4</u>	<u>1</u>	<u>2</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>.03</u>	<u>.01</u>	<u>.02</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>6</u>	<u>191</u>	<u>31.83</u>	<u>1.62</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.01</u>

VI. Abundance of Boobys:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.01</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>4</u>	<u>323</u>	<u>.03</u>	<u>4</u>	<u>323</u>	<u>.03</u>

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SMITHSONIAN INSTITUTION
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AT SEA SURVEY CHART A

DATE: 20 July 64 Total Minutes: 784 Total Miles 121

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>33</u>	<u>910</u>	<u>27.53</u>	<u>7.52</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile				
T	WT	P	B	T	WT	P	B	T	WT	P	B		
<u>21</u>	<u>13</u>	<u>6</u>	<u>1</u>	<u>742</u>	<u>195</u>	<u>151</u>	<u>9.86</u>	<u>3.69</u>	<u>1</u>	<u>2.00</u>	<u>1.20</u>	<u>.12</u>	<u>.01</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.33</u>	<u>.33</u>	<u>.02</u>	<u>.01</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>13</u>	<u>413</u>	<u>31.96</u>	<u>5.48</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>3</u>	<u>1.50</u>	<u>.02</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>7</u>	<u>679</u>	<u>.06</u>	<u>7</u>	<u>579</u>	<u>.06</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 21 July 64

Total Minutes: 192

Total Miles 122

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
26	206	5.0	1.67

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	WT	P	B	T	WT	P	B	T	WT	P	B
30	6	17	3	67	16	31	3	773	201	1.82	100.55

III. Abundance of Tropicbirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile					
T	RT	WT	T	RT	WT	T	RT	WT
2	2	-	1.00	0.00	-	0.00	0.00	-

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
6	135	22.5	11.1

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	2	1.00	0.00

VI. Abundance of Boobys:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
2	2	2	2	2	2	2	2	2	2	2	2

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	2	1.00	0.00

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
5	127	04	1	87	01

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 22 July 64 Total Minutes: 783 Total Miles 130

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
62	427	6.89	3.28

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile						
T	WT	P	B	T	WT	P	B	T	WT	P	B				
55	9	53	-	152	17	131	-	2.73	1.59	2.07	-	1.15	13	1.01	-

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
2	1	1	3	1	2	1.50	1.00	2.00	.02	.01	.02

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
11	273	24.82	2.10

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	
1	—	—	1	—	—	—	1.00	—	—	—	0.1	—

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
12	348	0.9	9	325	0.7

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 23 July 64

Total Minutes: 770 Total Miles 151

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
37	138	3.73	1.98

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile					
T	WT	P	B	T	WT	P	B	T	WT	P	B			
35	4	31	-	55	7	47	-	1.57	1.75	1.52	-	.39	.05	.33

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
4	83	20.75	.57

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
3	89	.02	2	84	.01

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SMITHSONIAN INSTITUTION
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AT SEA SURVEY CHART A

DATE: 24 July 64 Total Minutes: 153 Total Miles 138

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
37	57	1.54	41

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
35	15	20	-	49	17	27	-	1.10	1.13	1.35	-	36	12	20	-

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
11	8	2.00	4.6

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
2	18	101	1	13	1.51

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SMITHSONIAN INSTITUTION
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AT SEA SURVEY CHART A

DATE: 256.14 Total Minutes: 765 Total Miles 120

1. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
59	204	3.46	1.70

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
57	11	42	1	194	51	131	1	3.29	4.61	2.12	1.12	1.62	1.13	1.04	1.01

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	10	5.00	0.00

V. Abundance of Shorebirds:

No. Sightings No. Birds Birds/Sighting Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	E

VII. Abundance of Frigatebirds:

No. Sightings No. Birds Birds/Sighting Birds/Mile

VIII. Abundance of Flocks

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
2	120	.02	2	120	.02

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DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 26 July 64 Total Minutes: 773 Total Miles 125

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
23	27	1.17	.22

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
22	2	14	0	23	2	15	0	1.05	1.00	1.07	0	.18	.02	.12	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	4	4.00	.03

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
0	0	0	0	0	0

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 22 July 64 Total Minutes: 785 Total Miles 126

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
25	39	1.48	.29

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
23	0	19	0	35	0	31	0	1.62	0	1.13	0	.28	0	.25	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
1	1	0	1	1	0	1.00	1.00	0	.01	.01	0

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	1	1.00	.01

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
1	5	.01	1	5	.01

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 28 July 64

Total Minutes: 797 Total Miles 146

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
23	147	6.39	1.62

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
19	0	14	0	74	0	640		8.89	0	4.57	0	.51	0	.44	0

III. Abundance of Tropicbirds:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	
3	2	1	3	2	1	1.00	1.00	1.00	.62	.01	.01				

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
4	70	17.50	.49

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
5	126	.03	3	114	.02

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 23 July 64

Total Minutes: 814

Total Miles 159

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
14	217	15.50	1.36

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
7	0	3	1	57	0	5	1	8.14	0	1.67	1.00	.36	0	.63	.01

III. Abundance of Tropicbirds:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	
4	3	1	4	3	1	1.00	1.00	1.00	.03	.62	.01				

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
4	156	39.00	.98

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
1	200	01	1	200	01

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 30 July 64

Total Minutes: 308 Total Miles 89

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
13	17	1.31	.19

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
5	0	1	2	5	12	1	-	1	1	.06	.01	.02			

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
6	3	2	6	3	2	1	1	1	.07	.03	.02

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	5	5.00	.06

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
1	5	.01	-	-	

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 31 July 64

Total Minutes: 800 Total Miles 162

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
22	81	3.68	.57

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
16	5	2	1	31	11	2	1	1.94	2.20	1	1	.22	.08	.01	.01

III. Abundance of Tropicbirds:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	
3	2	1	3	2	1	1	1	1	.02	.01	.01				

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
5	43	8.60	.30

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
3	4	1.33	.03

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
3	58	.02	3	58	.02

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 1 August 64

Total Minutes: 300

Total Miles 68

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
123	368	2.99	5.41

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
52	49	0	6	100	89	0	6	1.91	1.82	0	1.00	1.47	1.31	0.09	

III. Abundance of Tropicbirds:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT	
3	2	1	3	2	1	1.00	1.00	1.00	0.04	0.03	0.01				

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
75	258	3.44	3.79

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
6	0	5	1	7	0	5	2	1.17	0	1.00	2.00	1.0	0	0.01	0.03

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
4	138	.06	2	119	.02

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 13 July 64

Time at sunrise = Position at sunrise = 21° 10' N 157° 30' W

Time at sunset = Position at sunset = 20° 40' N 157° 30' W

Miles traveled from 0000 hours to sunrise = -

Miles traveled from sunrise to sunset = 51

Miles traveled from sunset to 2400 hours = 14

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 13 July 64

Time at sunrise = Position at sunrise = 19° 29' N 157° 28' W

Time at sunset = Position at sunset = 17° 44' N 157° 30' W

Miles traveled from 0000 hours to sunrise = 69

Miles traveled from sunrise to sunset = 125

Miles traveled from sunset to 2400 hours = 51

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART B

DATE 15 July 64

Time at sunrise = Position at sunrise = 15° 23' N 156° 59' W
Time at sunset = Position at sunset = 13° 08' N 157° 02' W
Miles traveled from 0000 hours to sunrise = 60
Miles traveled from sunrise to sunset = 145
Miles traveled from sunset to 2400 hours = 32

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 16 July 64

Time at sunrise = Position at sunrise = 10° 21' N 152° 01' W
Time at sunset = Position at sunset = 10° 28' N 154° 35' W
Miles traveled from 0000 hours to sunrise = 65
Miles traveled from sunrise to sunset = 140
Miles traveled from sunset to 2400 hours = 55

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 17 July 64

Time at sunrise = 0602 Position at sunrise = $10^{\circ}55'N$ $153^{\circ}52'W$

Time at sunset = 1846 Position at sunset = $13^{\circ}02'N$ $154^{\circ}08'W$

Miles traveled from 0000 hours to sunrise = 61

Miles traveled from sunrise to sunset = 127

Miles traveled from sunset to 2400 hours = 43

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 18 July 64

Time at sunrise = 0556 Position at sunrise = $14^{\circ}41'N$ $153^{\circ}54'W$

Time at sunset = 1853 Position at sunset = $16^{\circ}58'N$ $154^{\circ}00'W$

Miles traveled from 0000 hours to sunrise = 56

Miles traveled from sunrise to sunset = 137

Miles traveled from sunset to 2400 hours = 38

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 19 July 64

Time at sunrise = Position at sunrise = $18^{\circ}44'N$ $153^{\circ}59'W$
Time at sunset = Position at sunset = $20^{\circ}42'N$ $154^{\circ}01'W$
Miles traveled from 0000 hours to sunrise = 68
Miles traveled from sunrise to sunset = 118
Miles traveled from sunset to 2400 hours = 50

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 20 July 64

Time at sunrise = Position at sunrise = $22^{\circ}27'N$ $153^{\circ}59'W$
Time at sunset = Position at sunset = $23^{\circ}31'N$ $152^{\circ}53'W$
Miles traveled from 0000 hours to sunrise = 55
Miles traveled from sunrise to sunset = 121
Miles traveled from sunset to 2400 hours = 43

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART B

DATE 21 July 64

Time at sunrise 0527 Position at sunrise = 23°26'N 151°06'W
Time at sunset 1842 Position at sunset = 21°28'N 151°01'W
Miles traveled from 0000 hours to sunrise = 55
Miles traveled from sunrise to sunset = 122
Miles traveled from sunset to 2400 hours = 59

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 22 July 64

Time at sunrise 0537 Position at sunrise = 19°35'N 150°57'W
Time at sunset 1840 Position at sunset = 17°23'N 151°01'W
Miles traveled from 0000 hours to sunrise = 54
Miles traveled from sunrise to sunset = 130
Miles traveled from sunset to 2400 hours = 48

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 23 July 64

Time at sunrise = Position at sunrise = $16^{\circ} 38' N$ $150^{\circ} 59' W$

Time at sunset = Position at sunset = $16^{\circ} 34' N$ $151^{\circ} 39' W$

Miles traveled from 0000 hours to sunrise = 59

Miles traveled from sunrise to sunset = 147

Miles traveled from sunset to 2400 hours = 40

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 24 July 64

Time at sunrise = Position at sunrise = $16^{\circ} 30' N$ $151^{\circ} 30' W$

Time at sunset = Position at sunset = $16^{\circ} 33' N$ $151^{\circ} 33' W$

Miles traveled from 0000 hours to sunrise = 67

Miles traveled from sunrise to sunset = 138

Miles traveled from sunset to 2400 hours = 63

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 25 Apr 64

Time at sunrise = 0539 Position at sunrise = 10° 45' N 147° 54' W
Time at sunset = 1831 Position at sunset = 13° 45' N 147° 54' W
Miles traveled from 0000 hours to sunrise = 50
Miles traveled from sunrise to sunset = 130
Miles traveled from sunset to 2400 hours = 46

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 26 Apr 64

Time at sunrise = 0534 Position at sunrise = 10° 45' N 147° 54' W
Time at sunset = 1837 Position at sunset = 13° 45' N 147° 54' W
Miles traveled from 0000 hours to sunrise = 11
Miles traveled from sunrise to sunset = 125
Miles traveled from sunset to 2400 hours = 45

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART B

DATE 27 July 1964

Time at sunrise = Position at sunrise = $18^{\circ} 36' N$ $117^{\circ} 34' W$

Time at sunset = $18^{\circ} 32'$ Position at sunset = $20^{\circ} 00' N$ $117^{\circ} 50' W$

Miles traveled from 0000 hours to sunrise = 60

Miles traveled from sunrise to sunset = 124

Miles traveled from sunset to 2400 hours = 60

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 28 July 1964

Time at sunrise = Position at sunrise = $22^{\circ} 24' N$ $117^{\circ} 36' W$

Time at sunset = Position at sunset = $24^{\circ} 52' N$ $117^{\circ} 50' W$

Miles traveled from 0000 hours to sunrise = 11

Miles traveled from sunrise to sunset = 144

Miles traveled from sunset to 2400 hours = 40

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 29 July 64

Time at sunrise = ⁰⁵³⁵ Position at sunrise = $25^{\circ} 29' N$ $150^{\circ} 32' W$

Time at sunset = ¹⁵⁴⁹ Position at sunset = $25^{\circ} 16' N$ $150^{\circ} 33' W$

Miles traveled from 0000 hours to sunrise = ⁵⁹

Miles traveled from sunrise to sunset = ¹⁵⁹

Miles traveled from sunset to 2400 hours = ⁴¹

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 30 July 64

Time at sunrise = ⁰⁵³⁵ Position at sunrise = $24^{\circ} 58' N$ $152^{\circ} 24' W$

Time at sunset = ¹⁹⁰³ Position at sunset = $25^{\circ} 00' N$ $151^{\circ} 56' W$

Miles traveled from 0000 hours to sunrise = ⁶³

Miles traveled from sunrise to sunset = ⁸⁹

Miles traveled from sunset to 2400 hours = ³⁸

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 31 July 64

Time at sunrise = Position at sunrise = $42^{\circ}00'N$ $156^{\circ}02'W$
Time at sunset 1910 Position at sunset = $21^{\circ}31'N$ $157^{\circ}01'W$
Miles traveled from 0000 hours to sunrise = 73
Miles traveled from sunrise to sunset = 142
Miles traveled from sunset to 2400 hours = 39

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 1 Aug 64

Time at sunrise = Position at sunrise = $21^{\circ}55'N$ $157^{\circ}04'W$
Time at sunset 1100 Position at sunset = $21^{\circ}19'N$ $157^{\circ}52'W$
Miles traveled from 0000 hours to sunrise = 58
Miles traveled from sunrise to sunset = 68
Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 13 July 64

TIME	FAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400															
0500															
0700															
0800															
0900															
1000															
1100															
1200															
1300															
1400	21 19	157 58													
1500	21 13	157 54													
1600	21 03	157 42													
1700	20 53	157 34													
1800	20 43	157 31													
1900	20 37	157 28													
2000	20 35	157 30													
2100	20 35	157 30													
2200	20 34	157 25													
2300	20 34	157 17													
2400	20 34	157 12													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

71 1099

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 14 Jul 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20 34	157 16													
0200	20 14	157 06													
0300	20 03	157 01													
0400	19 52	157 00													
0500	19 41	156 59													
0600	19 29	156 58													
0700	19 17	156 58													
0800	19 05	156 58	14	25	1019.2	24.6	21	81	6		15-5-5	25.3	15	80	5-12
0900	19 00	156 58													
1000	18 57	156 58													
1100	18 46	156 59													
1200	18 35	157 00													
1300	18 23	157 00													
1400	18 11	157 00	01	25	1017.3	25.7	21	77	6		10-5-5	25.7	20	100	5-12
1500	18 00	157 01													
1600	17 47	157 00													
1700	17 34	157 00													
1800	17 30	157 00													
1900	17 25	157 00													
2000	17 14	156 59	01	10	1017.0	25.2	31	77	5		10-15	25.1	19	70	5-12
2100	17 09	156 59													
2200	16 57	156 59													
2300	16 45	156 59													
2400	16 33	156 59													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 15 July 64

TIME	FAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16 20	156 59													
0200	16 08	156 59	01	10	1016.2	23.1	71	77	2	-	70-5-5	256	20	70	5-12
0300	15 56	156 59													
0400	15 56	156 57													
0500	15 47	156 59													
0600	15 34	156 59													
0700	15 21	156 59													
0800	15 07	156 59	07	10	1016.1	25.0	26	100	6	-	50-5-5	255	20	70	5-12
0900	14 54	156 59													
1000	14 40	156 59													
1100	14 26	156 59													
1200	14 23	156 59													
1300	14 21	156 59													
1400	14 07	156 59	01	10	1016.1	26.2	22	97	4	-	70-5-5	255	16	60	5-12
1500	13 56	157 00													
1600	13 43	157 00													
1700	13 32	157 01													
1800	13 20	157 01													
1900	13 08	157 02													
2000	13 05	157 02	01	10	1016.0	26.3	22	97	4	-	70-5-5	257	18	70	5-12
2100	13 05	157 02													
2200	13 03	157 02													
2300	12 48	157 02													
2400	12 36	157 01													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 16 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12 24	157 01													
0200	12 12	157 01	08	10	1015.0	260	23	83	9		10-5-3	265	18	70	SE 12
0300	12 00	157 01													
0400	11 49	157 01													
0500	11 37	157 01													
0600	11 31	157 01													
0700	11 29	156 59													
0800	11 23	156 59	14	25	1013.5	271	23	84	6		10-5-3	266	16	110	SE 12
0900	11 17	156 58													
1000	11 13	156 27													
1100	11 10	156 16													
1200	11 04	156 05													
1300	10 59	155 54													
1400	10 54	155 43	51	10	1012.0	259	21	75	8		10-5-3	267	12	130	SE 12
1500	10 48	155 32													
1600	10 43	155 21													
1700	10 37	155 11													
1800	10 32	155 01													
1900	10 26	154 57													
2000	10 21	154 42	50	1	1011.0	240	23	94	9		10-5-3	267	16	110	SE 12
2100	10 18	154 38													
2200	10 12	154 27													
2300	10 07	154 15													
2400	10 02	154 04													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 17 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	10 00	153 57													
0200	10 02	153 57	02	10	1012.0	266	23	83	8	-	30-3-3	365	11	120	SE 12
0300	10 15	153 57													
0400	10 29	153 57													
0500	10 42	153 57													
0600	10 55	153 57													
0700	11 08	153 58													
0800	11 19	153 59	02	10	1013.1	265	23	80	6	-	30-3-3	268	10	30	NW 17
0900	11 30	154 00													
1000	11 33	154 00													
1100	11 33	154 00													
1200	11 39	154 00													
1300	11 51	154 00													
1400	12 03	154 02	02	10	1011.8	261	24	84	6	-	30-3-3	268	12	40	N 12
1500	12 15	154 03													
1600	12 28	154 04													
1700	12 41	154 04													
1800	12 54	154 04													
1900	13 04	154 04													
2000	13 04	154 04	01	10	1014.0	261	23	82	2	-	30-3-2	263	18	10	N 12
2100	13 08	154 04													
2200	13 20	154 03													
2300	13 33	154 01													
2400	13 45	153 59													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 18 July 64

TIME	FAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	13 57	153 57													
0200	14 09	153 56	02	10	1014.0	269	21	76	3		30-5-16	26.4	16	70	N-12
0300	14 22	153 55													
0400	14 27	153 54													
0500	14 30	153 54													
0600	14 42	153 54													
0700	14 53	153 55													
0800	15 05	153 56	02	10	1015.0	258	21	75	4		30-5-1	26.6	17	70	N-12
0900	15 17	153 57													
1000	15 30	153 58													
1100	15 42	153 59													
1200	15 55	154 00													
1300	16 00	154 01													
1400	16 00	154 01	02	25	1014.5	259	22	74	2		30-5-1	26.5	15	60	N-12
1500	16 11	154 00													
1600	16 23	153 59													
1700	16 35	153 57													
1800	16 47	154 00													
1900	16 59	154 00													
2000	17 10	154 00	02	17	1016.1	251	22	73	2		40-5-13	25.1	15	70	N-12
2100	17 15	154 00													
2200	17 28	153 59													
2300	17 30	153 59													
2400	17 36	153 59													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 19 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17 47	153 57													
0200	17 58	153 58	02	10	1015.6	249	21	78	3		30-5-1	251	19	60	N-12
0300	18 00	153 58													
0400	18 22	153 58													
0500	18 34	153 58													
0600	18 46	153 59													
0700	18 58	153 59													
0800	18 59	153 59	02	5	1011.5	237	21	83	8		30-5-1	247	7	60	N-12
0900	19 06	153 59													
1000	19 17	154 00													
1100	19 28	154 02													
1200	19 38	154 02													
1300	19 50	154 02													
1400	20 01	154 02	04	10	1010.1	261	22	77	4		30-5-1	252	71	80	N-12
1500	20 11	154 02													
1600	20 21	154 02													
1700	20 28	154 02													
1800	20 28	154 02													
1900	20 42	154 01													
2000	20 56	154 01	02	6	1010.6	241	22	87	6		30-5-1	251	78	60	N-12
2100	21 01	154 00													
2200	21 13	154 00													
2300	21 25	154 00													
2400	21 32	154 00													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 20 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	21 46	154 00													
0200	21 59	153 59	07	2	1013.5	243	19	67	67		70-5-1	249	25	76	N-12
0300	21 59	153 59													
0400	22 08	153 59													
0500	22 19	153 59													
0600	22 30	153 58													
0700	22 42	153 58													
0800	22 54	153 57	52	10	1020.3	240	21	63	67		70-5-16	249	21	70	N-12
0900	23 07	153 57													
1000	23 20	153 56													
1100	23 32	153 55													
1200	23 32	153 55													
1300	23 32	153 51													
1400	23 32	153 40	01	10	1020.1	240	20	74	67		70-6-2	247	16	70	E-12
1500	23 32	153 30													
1600	23 31	153 21													
1700	23 21	153 11													
1800	23 21	153 02													
1900	23 31	152 51													
2000	23 31	152 43	01	10	1019.5	241	20	71	69		70-6-2	245	18	70	E-12
2100	23 31	152 38													
2200	23 30	152 28													
2300	23 29	152 17													
2400	23 29	152 06													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 21 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	23 28	151 56													
0200	23 27	151 44	25	5	1019.1	229	20	83	8		50-6-2	244	13	50	E-12
0300	23 26	151 32													
0400	23 26	151 22													
0500	23 25	151 12													
0600	23 27	150 59													
0700	23 37	150 59													
0800	23 23	150 59	25	10	1020.1	239	21	83	5		50-6-2	244	11	20	S-12
0900	23 10	150 59													
1000	22 56	150 58													
1100	22 44	150 58													
1200	22 31	150 58													
1300	22 20	150 58													
1400	22 09	150 58	25	5	1016.6	239	21	94	7		50-6-2	244	18	40	S-12
1500	21 58	150 59													
1600	21 58	150 59													
1700	21 47	151 00													
1800	21 36	151 01													
1900	21 24	151 01													
2000	21 12	151 01	25	5	1016.6	244	22	86	8		50-5-18	246	18	20	S-12
2100	21 05	151 01													
2200	20 51	151 00													
2300	20 37	150 59													
2400	20 29	150 59													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 22 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20 29	150 59													
0200	20 16	150 58	50	5	1015.4	240	72	88	8		30-5-1	247	13	30	5-11
0300	20 03	150 58													
0400	19 54	150 58													
0500	19 43	150 57													
0600	19 30	150 57													
0700	19 18	150 58													
0800	19 06	150 58	16	5	1015.2	243	72	86	6		30-5-12	249	06	30	5-12
0900	19 58	150 58													
1000	19 58	150 57													
1100	18 48	150 57													
1200	18 37	150 59													
1300	18 24	150 59													
1400	18 12	150 59	01	25	1014.3	250	73	83	3		30-5-12	253	01	36	5-12
1500	18 01	150 59													
1600	17 49	151 00													
1700	17 37	151 00													
1800	17 25	151 01													
1900	17 25	151 01													
2000	17 18	151 01	02	10	1014.1	254	72	82	4		30-5-1	258	06	100	5-12
2100	17 13	151 00													
2200	17 01	151 00													
2300	16 49	151 00													
2400	16 37	151 05													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 23 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16 25	150 59													
0200	16 12	150 59	02	—	1015.6	260	22	83	12		100 6-3	260	9	120	5-12
0300	15 59	150 58													
0400	15 59	150 58													
0500	15 47	150 57													
0600	15 34	150 55													
0700	15 11	150 53													
0800	15 08	150 51	02	10	1014.6	260	22	78	11		100 5-2	262	12	110	5-12
0900	14 51	150 51													
1000	14 48	150 51													
1100	14 35	150 51													
1200	14 27	150 51													
1300	14 27	151 00													
1400	14 15	151 00	12	10	1014.2	262	22	77	6		100 5-1	264	12	110	5-12
1500	14 02	151 01													
1600	13 50	151 02													
1700	13 37	151 04													
1800	13 25	151 05													
1900	13 13	151 06													
2000	13 02	151 03	02	13	1013.5	263	23	80	1		100 4-3	266	13	110	5-12
2100	13 01	151 03													
2200	13 00	151 02													
2300	12 50	151 02													
2400	12 37	151 02													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 24 Dec 64

TIME	FAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12 25	151 2													
0200	12 13	151 02	67	10	1014.2	212	24	96	1		10-63	209	16	64	5-12
0300	12 01	151 02													
0400	11 48	151 01													
0500	11 35	151 01													
0600	11 30	151 00													
0700	11 29	150 56													
0800	11 24	150 46	17	10	1013.6	272	24	82	1		10-63	301	17	60	5-12
0900	11 20	150 33													
1000	11 15	150 24													
1100	11 10	150 14													
1200	11 05	150 03													
1300	11 01	149 51													
1400	10 55	149 42	03	11	1013.1	272	24	81	1		10-63	409	16	180	5-12
1500	10 57	149 30													
1600	10 44	149 18													
1700	10 38	149 07													
1800	10 32	148 56													
1900	10 26	148 45													
2000	10 21	148 34	01	10	1012.1	266	23	80	4		10-63-7	272	16	180	5
2100	10 19	148 30													
2200	10 12	148 19													
2300	10 05	148 08													
2400	09 58	147 58													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE

25 Feb 64

TIME	FAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	10 00	109 16													
0200	10 19	109 56	16	10	1015.6	260	23	25	4		110-5-3	270	07	110	N-12
0300	10 36	109 56													
0400	10 56	109 55													
0500	11 13	109 54													
0600	10 52	109 54													
0700	11 02	109 55													
0800	11 11	109 56	18	1/4	1015.8	247	22	90	8		110-1-3	268	08	110	N-12
0900	11 21	109 56													
1000	11 31	109 57													
1100	11 41	109 58													
1200	11 50	109 59													
1300	11 51	109 60													
1400	12 01	109 61	19	1/2	1014.1	269	25	88	7		410-3-7	269	11	70	N-12
1500	12 12	109 62													
1600	12 22	109 63													
1700	12 32	109 64													
1800	12 42	109 65													
1900	12 52	109 66													
2000	12 59	109 67	14	1/2	1015.7	263	22	77	7		410-6-5	266	11	60	N-12
2100	12 59	109 67													
2200	13 08	109 68													
2300	13 17	109 69													
2400	13 24	109 66													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 26 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	13 47	148 06													
0200	14 00	148 07	03	10	1014.3	255	21	76	6		50-6-5	262	19	60	N-12
0300	14 12	148 07													
0400	14 24	148 07													
0500	14 36	148 07													
0600	14 48	148 07													
0700	14 48	148 06													
0800	14 58	148 05	02	10	1014.3	251	21	91	7		50-5-5	256	20	70	N-12
0900	15 01	148 04													
1000	15 13	148 03													
1100	15 25	148 01													
1200	15 37	147 59													
1300	15 55	147 58													
1400	15 58	147 58	01	15	1014.5	256	20	71	2		50-5-5	261	18	60	N-12
1500	16 03	147 48													
1600	16 15	147 38													
1700	16 28	147 28													
1800	16 40	147 18													
1900	16 53	147 07													
2000	16 43	147 16	02	5	1014.6	247	22	84	2		50-5-8	210	21	60	N-12
2100	17 10	147 52													
2200	17 21	147 38													
2300	17 30	147 54													
2400	17 38	147 53													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE

27 Feb 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17 12	147 53													
0200	17 33	147 39	03	5	1015.1	246	20	78	7		30-5-5	252	17	60	N-12
0300	17 31	147 31													
0400	17 19	147 19													
0500	17 31	147 39													
0600	18 43	142 48													
0700	18 34	148 00													
0800	19 22	149 50	02	10	1016.2	232	21	71	3		30-5-5	252	17	70	N-12
0900	19 33	149 39													
1000	19 13	149 31													
1100	19 39	149 01													
1200	19 19	148 01													
1300	19 52	146 00													
1400	20 03	146 01	02	10	1014.7	245	23	71	6		30-5-5	254	21	50	N-12
1500	20 15	147 59													
1600	20 27	147 35													
1700	20 21	149 55													
1800	20 36	149 55													
1900	20 29	149 36													
2000	21 01	147 38	50	5	1017.0	243	20	77	7		30-5-5	248	19	30	N-12
2100	21 07	147 38													
2200	21 18	147 37													
2300	21 30	147 37													
2400	21 42	147 59													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 25 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	21 54	147 59													
0200	22 01	147 59	02	5	1016.7	235	18	71	8		50-5-5	237	20	70	N-18
0300	22 03	147 57													
0400	22 12	147 57													
0500	22 24	147 56													
0600	22 36	147 56													
0700	22 48	147 51													
0800	23 07	147 56	14	10	1017.2	238	16	70	8		50-5-5	240	20	70	N-12
0900	23 17	147 56													
1000	23 25	147 57													
1100	23 31	147 57													
1200	23 33	147 57													
1300	23 45	147 58													
1400	23 47	147 58	17	16	1019.5	231	21	93	7		50-5-5	240	22	70	N-12
1500	24 03	148 00													
1600	24 20	148 04													
1700	24 32	148 01													
1800	24 44	148 00													
1900	24 55	148 00													
2000	25 05	148 00	63	5	1021.2	232	13	73	5		50-5-5	241	24	50	N-12
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 29/3/64

TIME	FAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200				01	5	1021.8	229	19	78	6	6	60-6-6	238	6	60
0300															
0400															
0500															
0700	26 28	147 05													
0800	25 30	147 18	03	10	1024.7	225	10	85	7		60-6-5	232	7	60	SW-12
0900	25 35	147 18													
1000	25 38	147 13													
1100	25 40	147 08													
1200	25 47	149 08													
1300	25 50	149 21													
1400	25 44	147 33	02	10	1023.1	260	20	70	6		60-6-3	238	6	60	SW-12
1500	25 38	149 47													
1600	25 32	149 59													
1700	25 26	150 11													
1800	25 20	150 23													
1900	25 15	150 35													
2000	25 09	150 47	02	10	1022.9	240	20	78	4		60-6-3	234	6	60	SW-12
2100	25 05	150 51													
2200	25 08	151 00													
2300	25 00	151 00													
2400	25 00	151 14													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 30 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	24 59	151 28													
0200	24 59	151 41	62	10	1021.3	23.5	19		3		50-6-3	24.3	16	30	W-12
0300	24 57	151 51													
0400	24 59	151 56													
0500	24 58	151 57													
0600	24 56	151 58													
0700	24 57	151 59													
0800	24 57	151 58	01	10	1020.5	23.7	18		3		50-6-3	24.4	15	30	W-12
0900															
1000															
1100															
1200															
1300															
1400	24 57	151 55	02	10	1020.7	24.0	19		4		50-1-3	24.1	14	30	W-12
1500	24 56	151 56													
1600	24 56	151 57													
1700	24 55	151 54													
1800	24 55	151 57													
1900	24 55	151 51													
2000	24 56	151 51	03	10	1020.2	24.0	20		4		50-1-2	23.1	18	65	W-12
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 31 July 64

TIME	FAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15 48	154 35													
0200	15 48	154 34	01	10	1020.5	240	19		5		50-5-3	246	15	70	W 12
0300	15 48	154 34													
0400	15 48	154 33													
0500	15 48	154 32													
0600	15 48	154 31													
0700	15 48	154 30													
0800	15 48	154 29	07	10	1020.2	240	20		4		50-6-3	246	32	100	W 12
0900	15 48	154 28													
1000	15 48	154 26													
1100	15 48	154 26													
1200	15 48	154 25													
1300	15 48	154 24													
1400	15 48	154 23	01	10	1020.3	241	21		5		50-6-3	247	16	80	S-12
1500	15 48	154 22													
1600	15 48	154 21													
1700	15 48	154 21													
1800	15 48	154 20													
1900	15 48	154 19													
2000	15 48	154 18	02	10	1020.6	242	20		3		50-5-2	256	19	50	S-12
2100	15 48	154 18													
2200	15 47	154 19													
2300	15 47	154 18													
2400	15 47	154 19													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

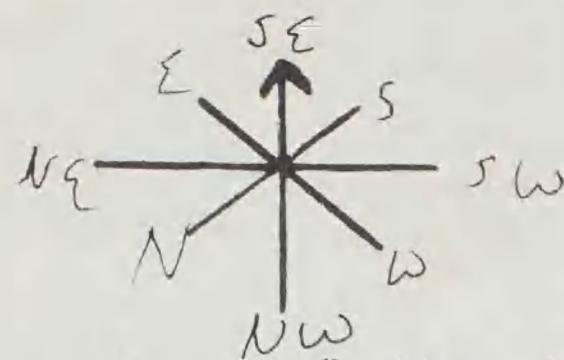
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 1 Aug 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	22 29	157 01													
0200	23 27	157 00													
0300	22 14	156 59													
0400	22 02	156 58													
0500	22 00	157 00													
0600	21 54	157 02													
0700	21 41	157 10													
0800	21 32	157 19													
0900	21 24	157 28													
1000	21 16	157 36													
1100	21 14	157 49													
1200	21 12	157 53													
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS



DATE 13 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
1400	begin observations					
1426	Wedgetail	1	SW		light	
1435	Wedgetail	3	SE		light	
1445	Sooty Tern	2	E			
1451	Wedgetail	1	SE		light	
1456	Bulwer's P	1	SW			
1457	Wedgetail	2	SE		light	
1510	Sooty Tern	3	NE			
1512	Sooty Tern	3	NE			
1531	Sooty Tern	1	SW			
1533	Noddy Tern	2	E			
1542	Sooty Tern	2	SW			
1550	Sooty Tern	15	SE		feeding flock	
	Red-footed Booby	2			1 adult, 1 sub-adult - sat on water	
	Bulwer's P	1				
1555	Sooty Tern	2	SW			
1559	Sooty Tern	1	SW			
1600	Sooty Tern	2	SE			
1605	Sooty Tern	1	SW			
1610	Sooty Tern	1	SW			
1611	Bulwer's P	1	SE			
1620	Sooty Tern	1	NE			
1631	Sooty Tern	1	SE			
1632	Bulwer's P	1	E			
1656	Great Frigate	1	E			
1705	Sooty Tern	1	SE			
1719	Wedgetail	1	E		Light	
1723	Wedgetail	1	S		Light	
1724	Petrel Shear	1	NE		Seemingly isolated	
1728	Red-footed Booby	7	E		traveling to for slack, may have been traveling together	
	Wedgetails	2	SE			
1733	Red-footed Booby	1	NE			

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DATE 13, July, 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1742	Wedgetail	2	S			
1750	Bonin I.S.P.	1	S		light	
1755	Sooty Tern	250	±50			
	Noddy Tern	75	±25			
	Wedgetail	75	±25		feeding flock	
	Dark winged P.	3+				
	Red footed Booby	1				
1800	Sooty Tern	75	±25		feeding flock	
	Fairy Tern	1				
	Wedgetail	2+				
1805	Sooty Tern	250	±50		feeding flock	
	Wedgetail	75	±25			
1815	Bulwer's P.	2	NE			
	Sooty Tern	1				
1817	Bulwer's P.	2	N			
1820	Bulwers P.	2	NE			
1825	Bulwers P	4	NE		Area affected by 2 tides converging - small	
			NE		choys	
1826	Sooty Tern	35				
1827	Bulwers P.	3	NE		feeding travelling	
1830	Wedgetail	1	NE		light	
	Bulwers P	2	NE			
1831	Bulwers P	1	NE			
1832	Bulwers P	3	NE			
1836	Bulwers P	1	NE			
1838	Bulwers P	2	NE			
1840	Wedgetail	1				
1841	Bulwers P	3	NE			
1843	Bulwers P	2	NE			
1852	Bulwers P	1	NE			
1909	Wedgetail	1	NE		light	
1916	Sooty Tern	1	W			
1920	Wedgetail S	1	②		light	
1925	End Observations					

1930/1

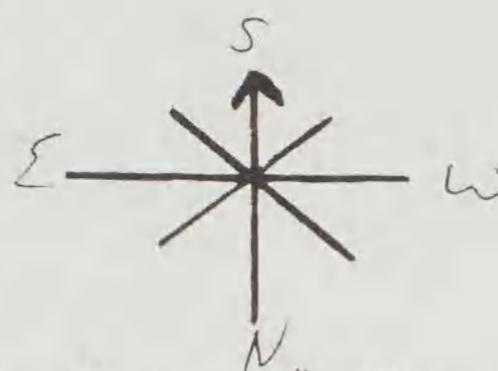
17

261. 1920



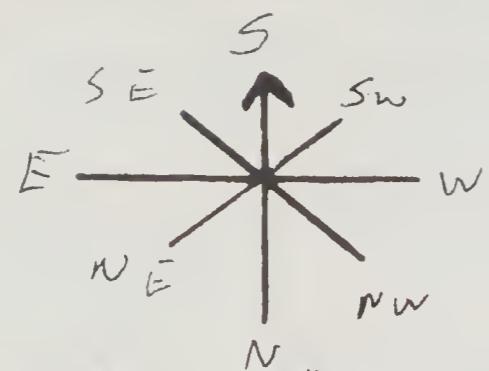
DATE 14 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0548	begin observations					
0555	Sooty Tern	2	S			
	Wedge-tail	1	S			
	Newell's S.	1				
0605	Wedge-tail	3	S			
0620	Sooty Tern	1	S			
0635	Bulwer's P.	1	NW			
0640	Newell's S	1	E			
0650	Bulwer's P.	1	S			
0654	Bulwer's P	1	S			
0700	Wedge-tail	1	S			
0703	Bulwer's P	1	W			
0704	Sooty Tern	4	NW			
0706	Wedge-tail	1	NE			
0715	Tropicbird sp	1	②			
0717	Sooty Tern	3	S			
0718	Bulwer's P.	1	SW			
0719	Wedge-tail	1	S			
0730	Frigate	2	N			
0736	Dark-rumped P	1				
	Bonin Is P	1	SW			
0750	Sooty Tern	8				
	Dark-rumped P	2				
	Wedge-tail	1				
	Bonin Is P	1				
	Frigate	1				
0801	Bulwer's P	1	SE			
0815	Wedge-tail	1	SE			
0817	Wedge-tail	1	S			
0819	Wedge-tail	1	SW			
0837	Wedge-tail	1	SW			
0851	Bulwer's P	1	SW			
0939	Wedge-tails	1	N			
0954	Sooty Tern	1	N			
1030	Dark-rumped P	1	N			
	Bonin Is P	1	N			



DATE 14 July 64
Pg. # 2

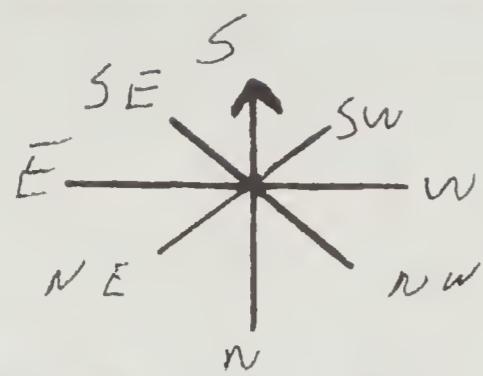
time	species	#	dir.	hgt.	remarks	loc.
1038	Dark-rumped P.	1	S			
	Bulwers P.	1	S			
1050	Bonin Is. P.	1	W		new plumage	
1115	Dark-rumped P.	1	SE			
1213	Wedgetail	30 [±] 5	(@)		28 dark light, 2 dark	
	Bonin Is. P.	50	6			
	Dark-rumped P.	2				
	Fairy Tern	2				
	Sooty Tern	50 [±] 5				
1239	Bonin Is P.	1	W			
1240	Wedgetail	1				
1256	Bulwers P.	1	N			
1300	Dark-rumped P.	1	W		seen by watch	
1305	Sooty Tern	6			travelling	
1306	Dark-rumped P.	1	SW			
	Wedgetail	1	S			
1309	Dark-rumped	1	SW		light new plumage - light grey	
	Wedgetail	1				
1315	Dark-rumped	1	SE		new plumage - light grey	1036.4
1314	Wedgetail	1	S			36
1320	Wedgetail	1	S			
	shear/petrel	1	S			
1328	Dark-rumped	2			light sitting on water	
	Wedgetail	1				
1345	Sooty Tern	2				
1350	Dark-rumped	1			seen by watch	
	Wedgetail	1				
1406	Bulwers P.	1	S			
1414	Bonin Is P.	1	W			
1426	Wedgetail	1	W		light	
1440	S. Shear Petrel	1	S			
	Wedgetail	2	S		light	
	Dark-rumped P.	1	S		light grey	
1445	Dark-rumped P.	1	SE		light grey	
1450	Wedgetail	1	W		light	



DATE 14 July, 1961
Pg. # 3

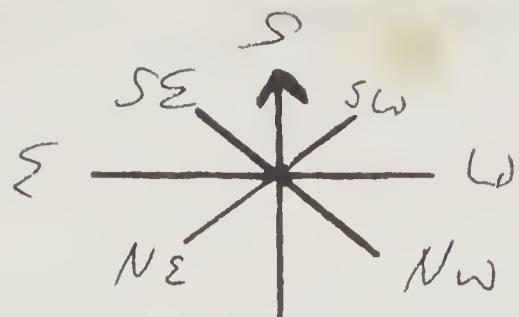
time	species	#	dir.	hgt.	remarks	loc.
1455	Sooty Tern	6	W		Traveling	
1459	Wedge-tail	1	W		Light	
1536	Bonin I. P.	1	S		new plumage	
1540	Dark-rumped P.	1	S			
1546	Sooty Tern	2	NW			
1554	Wedge-tail	1	N		Light	
1558	Shear/petrel	1	W		seen by watch	
1720	Bonin I. P.	1	W			
1739	Bonin I. P.	1	S			
1755	Dark-rumped P.	1	S			
	Bulwers P.	1				
1920	End observations					

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DATE 15 July 64
Pg. # 1

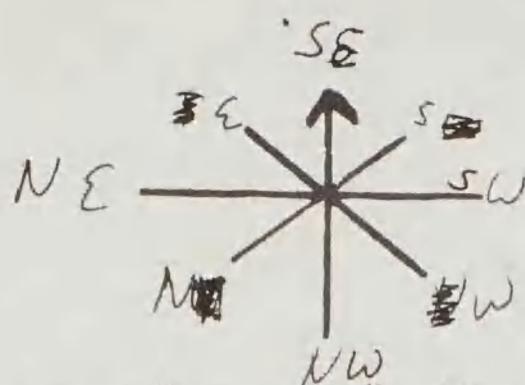
time	species	#	dir.	hgt.	remarks	loc.
0550	Begin Observations					
0630	Dark R. P.	2	W			
0710	Sooty Tern	12	W			
	Wedgetails	6±2				
	Dark R. P.	5				
	shear -petrels	10±2				
0725	Bonin Is P	1	SW			
0730	Dark-rumped P	1	SW		Darker gray on back.	
0755	Petrel sp	3+	SW		at considerable distance	
0815	Petrel sp	10±3	SE		scattered flock	
0825	Bonin Is P	1	S			
0831	White-necked P	1	NW			
0837	Sooty Tern Learwater Petrel sp	25+ 60+	SE		feeding flock almost all petrels	
	Dark-rumped P	1				
	Petrel sp	2				
0856	Dark-rumped P	1	SE			
0915	Shear/petrel	3	NE		molting	
0925	Bonin Is P	1	SE			
0926	Petrel sp	1	N			
0931	Petrel sp	1	SE			
0933	Dark-rumped P	1	SW		Dark gray on back	
0940	Shear-petrel	1	SE			
0946	Dark-rumped P	1	SW			
0950	Dark-rumped P	1	SE			
1024	Bonin Is P	1	W			
1045	Dark-rumped P	1	SE		Sitting on water - very dark on top	
1052	White-N. Petrel	1	SE		Sitting on water	
1104	Petrel sp	1	SW			
1108	shear/petrel	1			seen by capt.	
1226	Dark R. P.	1	NW			
1305	Dark R. P.	1	NW		dark on back.	
					" " "	
1311	Dark R. P.	1	SE		" " "	
1317	Dark R. P.	1	SW		Brownish on back.	
1325	Dark R. P.	1	NW			
1404	White-necked P	2	E			
1415	Shear/petrel	1	C		Molting, 1 sitting on water	



DATE 15 July 64
Pg. # 2

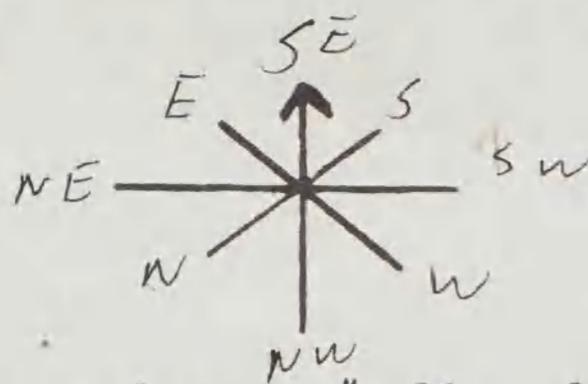
time	species	#	dir.	hgt.	remarks	loc.
1426	Dark-rumped P.	1	①		Molting	
1432	White-necked P.	1			sitting in water, molting	
1437	Dark-rumped P.	1			molting	
	Wedge-tail	1			dark, molting, sitting on water	
1440	Dark-rumped P.	2			molting	
1442	Wedge-tail	1			dark	
1504	Wedge-tail	2			dark, molting	
1516	Dark-rumped P.	1	NW		molting	
1518	Wedge-tail	2			sitting on water, dark, molting	
1528	Wedge-tail S.	4	S			
1538	Wedge-tail	5			sitting in water, molting	
1626	Dark-rumped P.	1	S			
1710	Bonin Is. P.	1	NW			
1730	Wedge-tail	2	①		dark	
1731	Fairy Tern	1	E			
1910	end observations					

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DATE 16 July 64
Pg. # 1

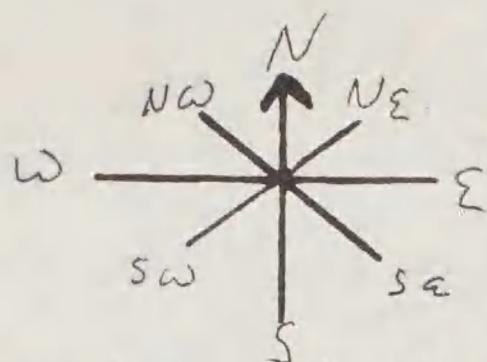
time	species	#	dir.	hgt.	remarks	loc.
0610	begin observations					
0650	Bonin Is P	1	NE			
0722	Bonin Is P	1	E			
0735	petrel sp.	1	S		settling on water - hash mark + borders. Pan molting	
0745	Dark-rumped P	1			seen by watch	
0755	Bonin Is P	1	W			
0821	S. shear-petrel	1	SW		seen by capt.	
0831	white-necked P	1	W			
0906	Petrel sp	1	SW			
0924	Dark-rumped P	1	SW			
1010	Dark-rumped P	1	NW			
1053	Newell's S.	1	NE			
1130	Sooty Tern	2	NE			
1132	Dark-rumped P	1	NE			
1135	Petrel 1 sp. X ?	1	SW		underwings entirely dark - size of DR P. Flew like DR P.	
1140	Bonin Is P	1	SW			
1145	Dark-rumped P	1	SW			
1147	Dark-rumped P	1	E			
1153	Dark-rumped P	1	E			
1230	Bonin Is P.	1				
	White-necked P.	1	N		molting	
1229	Fairy Tern	1	○			
1240	Wedgetail	1	S		dark	
1310	Shear/petrel	1			seen by watch	
1312	Bonin Is P.	1	NE			
1326	wedgetail	1	SW		dark	
1339	Bonin Is P	1	SW			
1342	Wedgetail	2	SE		dark	
	Bonin Is P	1	SE			
1346	Sooty Tern	1	SE			
1358	Wedgetail	2	E		dark	
1415	wedgetail	1	SE		dark	
1430	Dark-rumped P	1	NE			



DATE 16 July 64
Pg. # 2

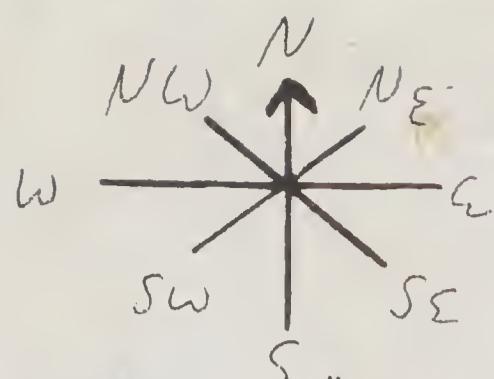
time	species	#	dir.	hgt.	remarks	loc.
1447	Wedge-tail	1	SE		dark.	
1505	Dark-rumped P	1	SW			
1533	Wedge-tail	1	NW		dark	
1542	Bonin Is P	1	SE		dark	
1603	Wedge-tail	1			dark	
	Dark-rumped P	1			seen by watch	
1610	Wedge-tail	2			seen by watch	
1625	squid 3" long jumped clear of water by bow of ship					
1637	Newell's S.	2	S			
1645	Sooty Tern	50 ± 10				
	Wedge-tail	50 ± 10			dark	
	Dark-rumped P	10 ± 2			shot / dark-rumped but due to misunderstanding	
	White-necked P.	5			ship didn't stop to pick it up.	
	Petrel/shearwater	1			Brown above, white underparts, brown underwing size of Dark-rumped, white banded tail	
1712	Newell's S.	1			shot and downed but recovered & flew away attempting recovery	
1731	Newell's S.	1	NE			
1733	Bonin Is P	1			—	
1840	Bonin Is	3				
1845	Dark R P	1				
1850	Dark A P	1				
1851	Wedge-tail	1	SW		dark.	
1900	End of observations					

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DATE 17 July 64
Pg. # 1

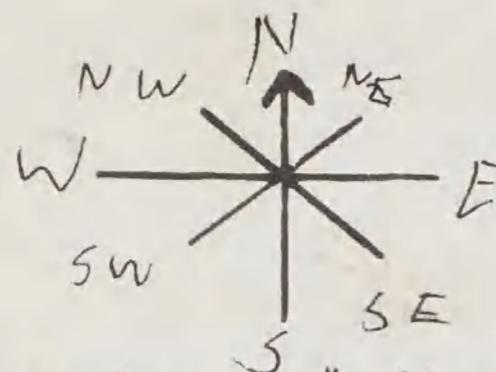
time	species	#	dir.	hgt.	remarks	loc.
0550	begin observations					
0630	Wedge-tail	1	NE		Dark.	
0700	Shear/Petrel	3			seen by watch	
0837	White-necked P.	1	S			
0838	Dark-rumped P.	1	S			
0907	Bonin Is. P.	1	W			
1013	Wedge-tail	1	N		Dark.	
0915	Dark-rumped P.	1			seen by watch	
1230	Shear/Petrel	1	NW		seen by watch	
1250	Shear/Petrel Dark Wedgetail	1	N		Dark	
1315	Wedge-tail	1	W		Light	
1439	Wedge-tail	1	E		dark	
1450	Bonin Is. P.	1	N			
1456	Red-tailed T.B.	1	(C)		very immature - no tail at all - much vermiculation on back, bill yellowish black	
1713	Dark-rumped P.	1	NW			
1840	Petrel/Shear	1	S			
1900	ad observations					



DATE 18 July 64
Pg. # 1

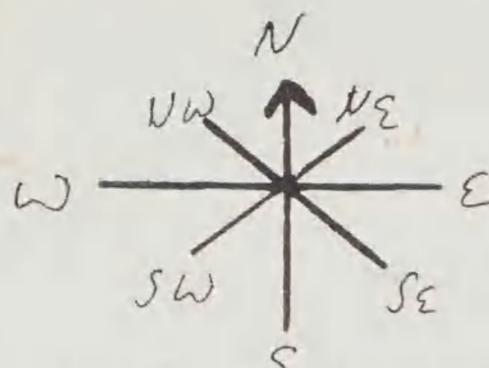
time	species	#	dir.	hgt.	remarks	loc.
0610	begin observations					
0735	Dark-rumped P	1	N			
0746	Dark-rumped P	1	NE		seen by watch	
0908	Dark-rumped P	1	SE			
0930	Red T. Tropicbird	1	E		Tail missing	
0945	Sooty Tern	10±10	70			
	Wedgetails	40±10			25 or 30 dark	
	Dark R. Petrels	20±3				
	Baronets P	5±1				
1030	Bonin Is P.	1	L			
1046	Wedgetail	2			dark	
	Dark-rumped P	1	NW			
1050	Red-tailed Tropicb.	1	②		heavy rolling	
1055	Bonin Is P.	1	NW			
1114	Bonin Is P	1			sitting in water	
1136	Dark-rumps	+			sitting on water	
1137	Dark-rumps	1			sitting on water	
1235	Bonin Is P	1	E			
1237	Dark-rumps	2			sitting on water	
1256	Petrel sp.	1	NE			
1255	Dark R. Petrel	1	NW			
1420	Petrel/Shear	3+				
1454	Dark-rumps	1	NW			
1456	Dark Rumps	1	N			
1503	Dark Rumps	3	E			
	Bonin Is P	1	NE			
1511	Dark-rumped	2	E			
1520	Dark-rumps	1	NW			
1535	Sooty Tern	10±62	NW			
	Dark R P	30±5				
	Wedgetails	15±5				
1540	Dark R P	2	NE		feeding	
1547	R.T. Tropicbird	1	SE			
1548	Dark R P	2	E			
1552	Bonin Is P	2	NE			

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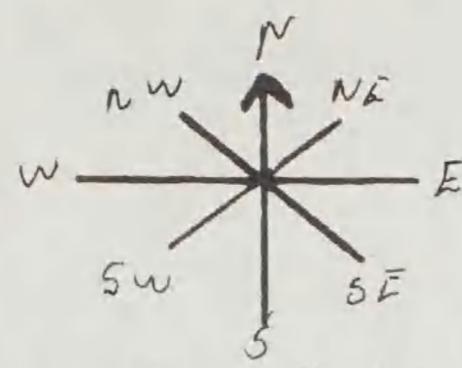
DATE 18 July 64
Pg. # 280

time	species	#	dir.	hgt.	remarks	loc.
JFP 1650	Dark-rumped P	1	SW			
JFP 1653	Dark-rumped P	2	NE			
BWP 1655	Bonin P	1	NW			
JFP 1658	Dark-rumped P	1	NW			
JFP 1701	Dark-rumped P	1	NE		somewhat lighter on back.	
JFP 1708	Dark-rumped P	1	NE			
JFP 1712	Dark R P	10				
BWP	Bonin P	1				
	Wedge-tail	4	N		light feeding	
JFP 1716	Dark R P	3	NW			
JFP 1725	Dark-rump	1	N			
JFP 1745	Dark-rumped	20			float feeding. fired 8 times or 10 at 50 ft	
JFP 1750	Dark-rumped	3	N		to 40 yds, some feathers fly or 3 birds, twice more	
1751	Wedge-tail	1	N		but none dropped immediately so we didn't slow	
1800	Wedge-tail	2	N		at best 2 killed, may be	
1810	Sooty Tern	1	E		up to 5 - with automatic	
1825	Shear-Petrel	1	E		several could have been dropped	
JFP 1826	Dark-rump	1	N			
JFP 1827	Dark-rump	1			sitting	
1900	end observations					



DATE 19 July 64
Pg. # 1

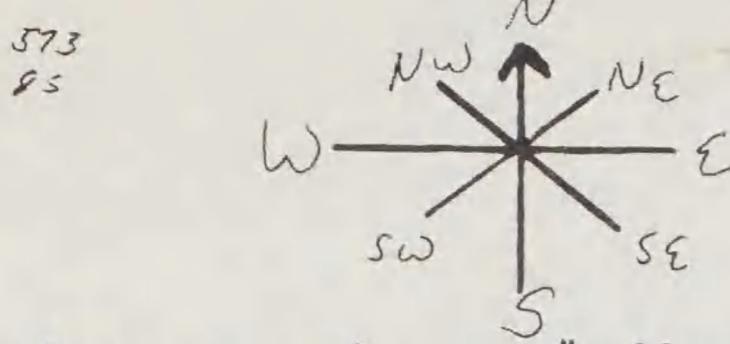
time	species	#	dir.	hgt.	remarks	loc.
0533	begin observations					
0621	Wedgetail white-necked P	1	NW		Dark.	
0625	Petrel sp	2	SE			
0629	Dark-rumped P	2	W			
0630	Wedgetail	1	W		Light	
0728	Shear- Petrel	1	SE			
0821	Wedgetail	1	SE		light	
0855	Dark-rumped	2	N			
	Wedgetail	2	N		light, 1 dark	
0856	Tropicbird sp	1	○			
0913	Dark-rumped P	1	S		no tiny	
0915	Shear/ petrel	2	W			
0916	Shorebird	1	○			
0917	Dark-rumped P	1	S		all brown, lighter below, with fairly long, straight bill. No white on tail, no barring - size of Golden Plover. Finned 5 times, but at least once	
0918	R.T. Tropicbird	1				
0930	D.R. Petrel	1	NW			
0933	PR Petrel	1	NE			
0935	Bonin Is P	1	N			
0944	Bonin Is P	1	NW			
0945	Bonin Is P	1	NW			
0955	Bonin Is P	1	NW			
1005	Sooty Tern	25±10				
JFP	Dark R. Petrels	25±10				
	Wedgetail	40±10				
BWP	Bonin Is P	10±5				
	Fairy Tern	2				
	Frigate	1				
1058	Sooty Tern	1	SW			
JFP	Dark R. Petrel	1	NW			
1045	Shear- Petrel	2	S			



DATE 19 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1055	Sooty Tern	60	± 20	NW	Feeding	
	Shear-Petrel	40±10				
1102	Puffin sps	1	NW		seen by watch & capt.	
1104	Wedgetail S	3	NE		Light	
BWP	Bonin Is P.	3			sitting on water	
JFP	Dark Lumps P.	1	N		molting	
	Sooty Tern	1	S	75ft		
BLB	Bonin Is P.	1	E		sitting on water	
BWP	Bonin Is P.	1				
BWP	Bonin Is P	2			seen by watch	
BWP	Bonin Is P	1			sitting on water	
1215	Sooty Tern	25±2				
	Wedgetail	5±2			2 dark - 3 light Feeding	
BWP	Bonin Is P	1	NW		sitting on water	
JFP	Dark A. Petrel	1	W			
JFP	Dark R. Petrel	1	NW			
1439	White-Tailed Tropicbird	1	(O)			
1450	Wedgetail S	1	(S)		Light	
1505	Sooty Tern	25±2				
	Wedgetail	14±2			2/ dark feeding float most Shear, sitting	
	Newell's S.	1			in water	
1528	Newell's S	2	NW			
1530	Shear/petrel	1	NW			
1531	White-tailed Tropicbird	1	N			
1650	Wedgetail	1	S		Dark	
1712	Wedgetail	1	W		Light	
BWP	Bonin Is P.	1	W			
1820	Wedgetail S.	1	E		dark	
1847	Sooty Tern	2	E		1 minute	
1908	end observation					

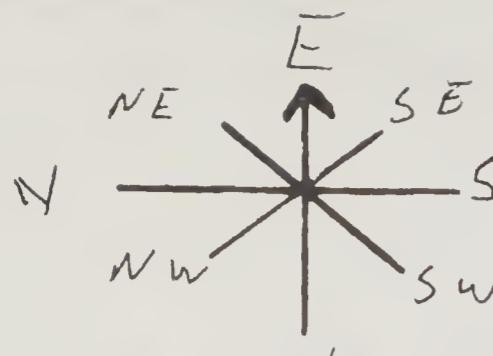
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DATE 20 July 64
Pg. # 1

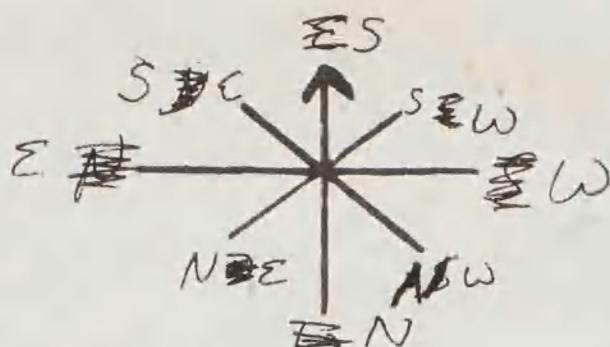
time	species	#	dir.	hgt.	remarks	loc.
0545	begin observations					
0550	Red-tailed Tropicbird	1	②			
0605	Wedge-tail	1			light - seen by watch	
0615	Wedge-tail	2				
0616	Petrel sp	1	S			
0620	Petrel sp	1	S			
0645	Wedge-tail	1	SW		light	
0656	Sooty Tern	1	SW			
0701	Sooty Tern	1	SW			
0705	Sooty Tern	1	SW			
0732	Sooty Tern	125	± 25			
	Wedge-tail	45	± 10		feeding flock, 1 dark	
	Frigate	2				
0743	Shear/petrel?	1				
	Sooty Tern	2			brown, 2 light patches under wings, rest of body brown but not too dark - not wedge-tail - seen by watch	
0824	W.T. Tropicbird	1	SE			
0835	Bulwer's P	1	SE			
BLW	Bulwer's P	1	NW			
0916	Petrel sp	1	W			
0920	Wedge-tail	1	NW		Dark.	
0932	Sooty Tern	75	± 10			
	Wedge-tail	40	± 10		feeding	
	Dark-rumped	1+			molting	
BLW	Bonin Is P.	1	NW			
0938	Shear-petrel	1	S		seen by watch	
0950	Shear-petrel	1			seen by watch	
0955	Shear-petrel	1			seen by watch	
1010	Sooty Tern	85	± 5	150 ft	feeding	
	Wedge-tail	25	± 10			
1049	Fairy Tern	1	NE			
1142	Sooty Terns	8			Feeding, light Wedgetails	
	Wedge-tail s	5	NE			
1151	Sooty Terns	25	S		- 2 or 3 dark	feeding
	Wedge-tails	10				
	Petrel sp	8			Dark-rumped or Bonin Is Petrels	

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DATE 20 July 64
Pg. # 2

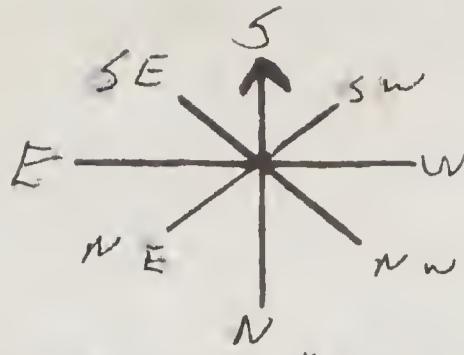
time	species	#	dir.	hgt.	remarks	loc.
1202	Wedgetail	1	E		Light	
1400	Sooty Tern	250	E	± 50		
	Shear/petrel	75		± 25		
	Frigate	1			feeding flock	
1445	Shear-Petrel	1	S			
1515	Shear - Petrel	1	N			
1535	Wedgetail	1	SE		Light	
1548	Shear/petrel	1	S			
1550	Sooty Tern	85		± 5		
	Fairy Tern	4			feeding	
	Wedgetail	10		± 5		
1635	Bonin Is P.	1	S			
1710	Wedgetail	3	NW		2 light 1 dark	
1910	End Observations					



DATE 21 July 64
Pg. # 1

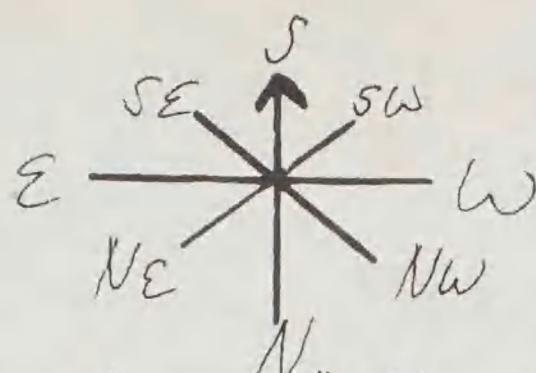
time	species	#	dir.	hgt.	remarks	loc.
0538	begin observations					
0545	Patrol-Shear	1	SE			
0617	Dark-rumped P	1	SW			
0621	Great Frigate	1	NW			
0714	Shear - Petrel	1	NW			
0757	Sooty Tern	1	N		immature - changing	
0813	Petrel sp	1	N			
0842	Dark-rumped P	1	S		molting	
0910	Sooty Tern	2				
1	Wedge-tail	4				
1	Dark-rumped	23				
1	Bonin Is P.	2				
1	Bulwers P	1				
0920	Sooty Tern	25 ± 2				
2	Shear/petrel	5 ± 2			dispersing	
1	Dark-rumped P	1	E			
1	Bonin Is P	1				
3	Sooty Tern	25 ± 5				
3	Shear/petrel	5 ± 2			travelling	
3	Wedge-tail	1	SW			
Per	White-necked P	2	SW			
Per	Wedge-tail	+	SW			
1009	Shear - Petrel	1	W			
1025	Bulwers P	1	SW			
1035	Dark-rumped P	1	SE			
1123	Christmas Is S.?	1	E		sitting on water - slightly smaller than wedge-tail, all dark	
1203	Sooty Tern	2	NW		1 immature	
1229	Bulwers P.	1	N			
1239	petrel sp.	1	SW			

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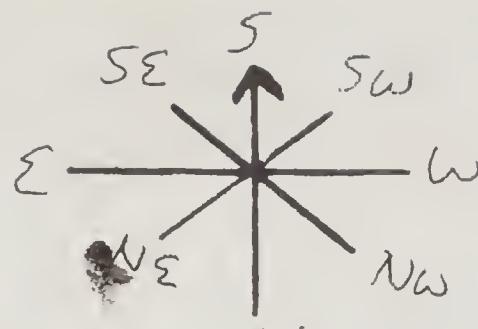
DATE 21 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1310	Frigatebird? Shear/petrel X	1	SW		All dark underwings except for narrow (very narrow) white strip in middle of wing. No dark breast band, no black on head or back that could be seen. Fly like a cross between Bonin & Parrot A. S. Petrel. About the size of a D. R. Par a little smaller. Body was white.	
1330	Wedge-tail	2	SW			
1335	Dark R. P. Wedge-tail	2	SE		I collected by Husted # 0509 1.05 lbs.	
1342	Sooty Terns	1				
1410	D. R. Petrel	1	SE			
1450	Sooty Tern Wedge-tail Shear/petrel Dark-rumped	75+ 5+ 5+ 5+			feeding flock - rising - formed & dissolved several times during hydro station	
1451	Dark-rumped	1	E		headed toward flock with feeding flock	
	Frigatebird Bonin Is P	1				
1630	At least? Bonin Is P.	1	S		Very small, white underneath, flew like Bonin Is., may have been a small Bonin Is.	
1635	Wedge-tail	3	SW			
	D. R. Petrel	2				
	Sooty Terns	3				
1640	Bonin Is P	1	SE		Sitting on water	
1644	B.T. Tropicbird	1	SE			
1735	Red-tailed Tropic	1			sitting on water	
1841	Dark-rumped P	2	NW			
1844	Bonin Is P	1	W			
1850	Shear/petrel	1	W			
1900	Shear/petrel	1	S		seen by watch	
1910	end observations					



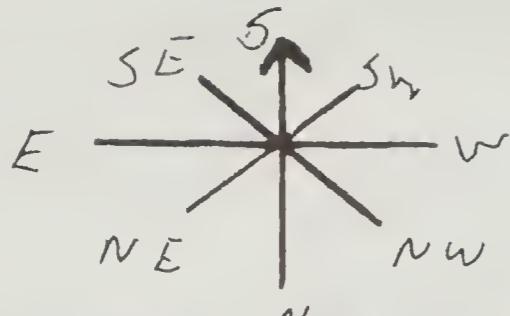
DATE 22 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0545	begin observations					
0610	Dark-rumped P.	1	SE			
0614	White-necked	2	S			
0625	Pelican sp.	1			sitting on water	
0640	Booby sp	1	N	75ft	seen in distance - described by engineer as big white bird with long neck	
0715	Dark-rumped P.	2	S			
0720	Dark-rumped P.	2	S		molting slightly, 1 pretty dark	
0730	Dark-rumped P.	2	S			
	Newell's S.	1				
0736	Red-tailed Tropicb.	1	(C)			
0758	Dark-rumped P.	1	E		molting	
0810	Dark-rumped P.	1	E			
	Bonin Isp.	1	S			
0815	Wedge-tail	2	E			
	Dark-rumped P.	1			Feeding	
	Bonin Isp.	1				
0820	Newell's S	1	E		seen by capt, right in sun	
0824	Dark R. P	3	W			
	Petrel sp	2			Feeding	
0830	Dark-rumped P.	1	E		light back.	
0840	Dark-rumped P.	1	SE			
0935	Dark-rumped P.	2	S			
1000	Dark-rumped P.	1	SW			
1020	Dark-rumped P.	1			sitting water	
1040	Sooty Tern	25	E			
	Dark-rumped P.	6			Feeding	
	Wedge-tail	6			collected by King #0510	
1045	White-necked P.	2			light	
	Dark-rumped P.	1			collected by King #0511	



DATE 22 July 64
Pg. # 2

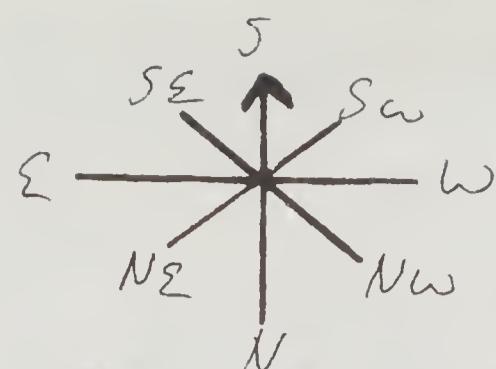
time	species	#	dir.	hgt.	remarks	loc.
1105	Petrel sp	3			seen by watch	
1110	Sooty Tern	90				
	wedgetail	2				
	Dark-rumped P	6				
	White-necked P	2				
	Fairy Tern	1				
1120	Sooty Tern	25				
	Dark-rumped	5				
	White-necked	1				
1130	Sooty Tern	20				
	Dark-rumped	6				
	White-necked	2				
	Wedge-tail	1				
	Fairy Tern	1				
1135	Dark-rumped	6				
	White-necked	1				
	Wedge-tail	1				
1145	Dark R P	1			collected by Hustled # 0512	
1148	DR P Petrel	1	SE			
1149	W.T. Tropicbirds	2	E			
1250	DR P Petrel	1	W			
1225	Dark-rumped P	1	S			
1227	Wedge-tail	1	-			
1229	Dark-rumped P	1	NE			
1235	Sooty Tern	20		± 10		
					following ship, light	
1238	Dark-rumped P	1	W			
1246	Sooty Tern	7	S			
1250	Dark-rumped P	1	SW		travelling	
1255	Dark-rumped P	2				
1300	Dark-rumped P	1			setting	
1301	Dark-rumped P	3			"	
1302	Sooty Tern	55		± 2		
	Dark-rumped P	5			feeding	
1330	Dark R P	2	S		sitting on water	



DATE 22 July 64
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
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1344	Dark-rumped P	1	SE			
1348	Petrel sp.	1	SE		seen by watch	
1356	Dark-rumped P	1	SE			
1400	Dark-rumped P. White-necked P	6	SE			
		2	S			
1441	Dark-rumped P	1	SE			
1450	Sooty Tern	20	SE			
	Dark-rumped P	44				
1450	Dark-rumped White-necked P	7				
		2				
1452	Dark-rumped	3				
1506	Dark-rumped	1	S			
1509	Dark-rumped P Wedge-tail	1	N			
1534	DRP	1	W			
1535	DRP Wedge-tail	1	S			
1538	DRP	2	SE			
1539	Bonin's P	1	NE			
1555	DRP	1	S		collected by Husted #0514	
1602	Dark-rumped P	1	S			
1610	Fairy Tern	1	SE			
1614	Petrel sp	4	SW		seen by watch	
1628	Sooty Terns DRP Wedge-tails	6 4 2	SE		Feeding	
1650	Dark-rumped P.	2			I shot by Husted but, although pointed out by watch, first mate had made his turn, said he couldn't see bird and resumed course. Gave no cogent reason for not picking up bird.	77



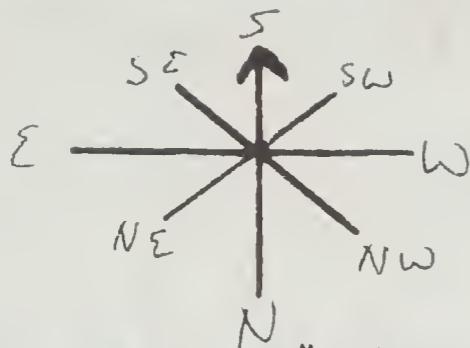
DATE 22 July 64
Pg. # 4

time	species	#	dir.	hgt.	remarks	loc.
1754	Dark-rumped P.	1	S			
1836	Tropic Tern	2	N			
1900	Fairy Tern				end observations	

$$\begin{array}{r} 14 \\ 17 \\ 268 \\ 103 \\ 114 \\ \hline 427 \end{array}$$

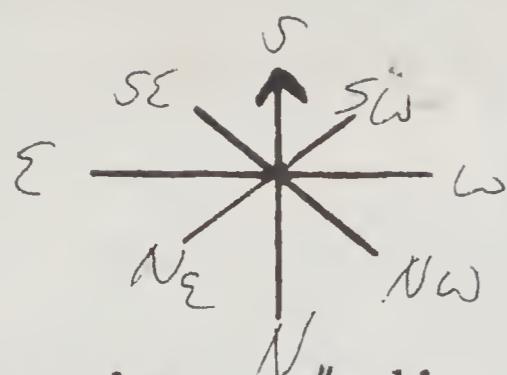
$$\begin{array}{r} 30 \\ 20 \\ 600 \\ \hline 1000 \end{array}$$

$$\begin{array}{r} 17 \\ 278 \\ 72 \\ \hline 427 \end{array}$$



DATE 23 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0538	Begins observations					
0625	Bonin Is P	1	SE			
0638	Sooty Tern	1	E			
0652	Petrel up	3	SW			
0701	Wedge-tail	1	SW		Light Dark	
0708	Sooty Tern	2	SW			
0717	Dark-rumped P	1	SW			
0728	Dark-rumped P	1	S			
0731	Petrel up	1	SW			
0815	Dark-rumped P	1	N			
0820	Dark-rumped P	3			sitting on water	
0823	Dark-rumped P	3	S			
0827	Dark-rumped P	2	S			
0834	Dark-rumped P	1	S		sitting	
0837	Dark-rumped P	2	SW		sitting	
0842	Dark-rumped P	5			sitting	
0855	Dark-rumped P	1			sitting	
0858	Dark-rumped P	1	SE			
	White-necked P					
0916	Dark-rumped	1	E			
	Bonin Is P	1	W		nesting	
0925	Dark-rumped P	3				
0948	Dark R P	1	SW			
1020	Dark-rumped P	1	W			
1115	Bonin Is P	1	N			
1130	Sooty Tern	30	±1			
	Dark-rumped P	3+				
	Wedge-tail	1+				
1131	Sooty Tern	50	±25			
"					way out - feeding - probably shear/petrel too but too far	
1325	Bonin Is. P	1	SE			
1420	Hirundo's Storm Petrel	1	N			
1445	Dark-rumped?	1	NW			
1506	Dark-rumped	1	SE			

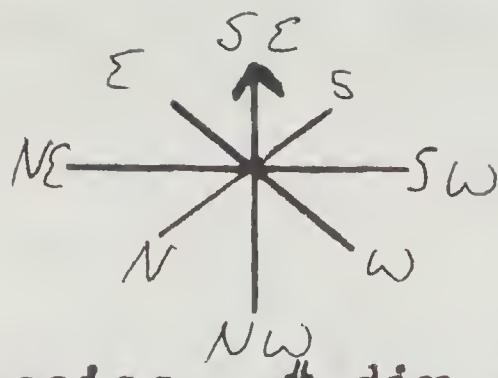


DATE 23 July 64
Pg. # 2

time species # dir. hgt. remarks loc.

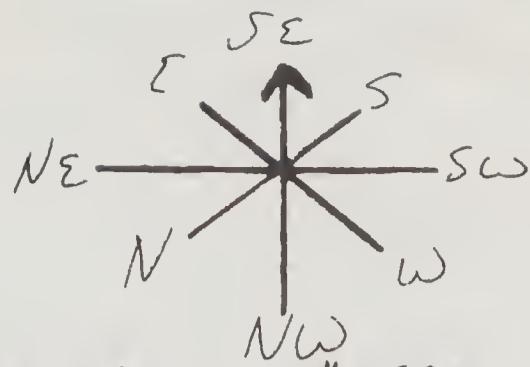
1715	Petrel sp	1	SW			
1728	Dark Rumped P	1	S			
1734	Wedgetail	1	SE		Dark.	
1750	Petrel sp	1	SW			
1800	Petrel sp	1	SW			
1802	Dark-rumped	1	NE			
1820	Dark-rumped	1	N			
1840	Dark-rumped	1	SE			
1842	Wedgetail	4	SW		dark	
1850	and albatross					

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DATE 24 July 64
Pg. # 1

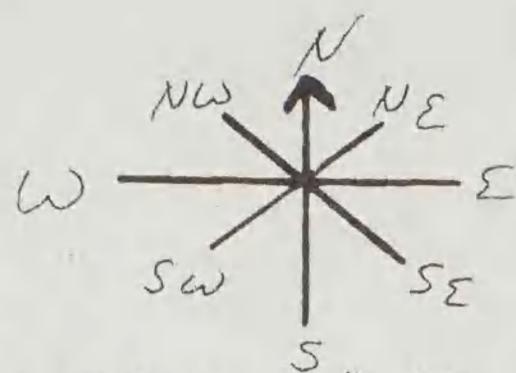
time	species	#	dir.	hgt.	remarks	loc.
0400	feeding flock	30			species undetermined, seen by 2nd mate in the light of full moon, working	
0610	begin observations					
0616	Bonin Is P	1	E			
0640	Wedgetail	1	SW		dark	
0648	Sooty Tern	3				
	Dark-rumped	7				
	Wedgetail	3			feeding	
0654	Dark-rumped P	1	SE		dark	
0714	Wedgetail	1			dark, seen by watch	
0728	Shearwater	3				
0732	Dark-rumped?	1	W		seen by watch	
0811	Shear-Petrel	1	NE		seen by watch	
0845	DR Petrel	1	S			
0854	Bonin Is P	1	SE			
0913	Dark-rumped P	1	S			
0926	Wedgetail	1	W		Dark.	
1005	Bonin Is P	1	NW			
1147	Wedgetail	1	E		Dark.	
1201	Sooty Tern	1	NE			
1209	Dark-rumped?	1	SW			
1318	Wedgetail	1	SW		dark	
1321	Wedgetail	1	NW			
1332	Wedgetail	1	NW		dark	
1350	Wedgetail	1	NW		dark	
1415	Petrel sps	1	NW			
1418	Wedgetail	1	NE		Dark	
1423	Dark-rumped P	1	SE			
1441	Wedgetail	1	E		Dark.	
1444	Bonin Is P	1	NE			
1513	Dark-rumped P	1	NE			
1607	Wedgetail	1	NW		dark	
1610	Wedgetail	1	W		dark	



DATE 24 July 64
Pg. # 2

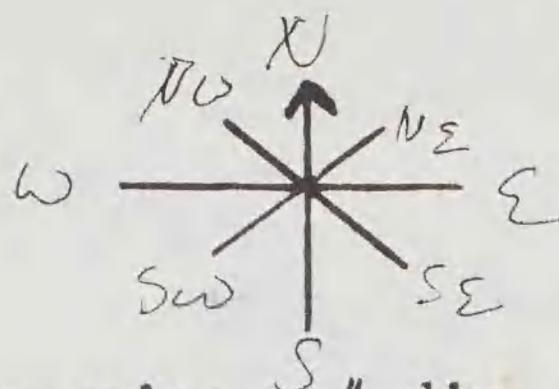
time species # dir. hgt. remarks loc.

1610	Sooty Tern	1	NW			
1630	Bonin Is P	1			seen by watch	
1655	Bonin Is P	1	E		in heavy rain squall	
1712	Bonin Is P	1	S		new plumage	
1715	Wedge-tail	1	E		Dark.	
1725	W. N. Tern	1	SE			
1806	Bonin Is P	2	E			
	Harcourt's Storm P	1	N		stiff winged	
1808	Bonin Is P	1	SW			
1811	Sooty Tern	3				
	Wedge-tail	1			dark	
	Dark-morphed P	1			dispersing flock	
1844	End observations					



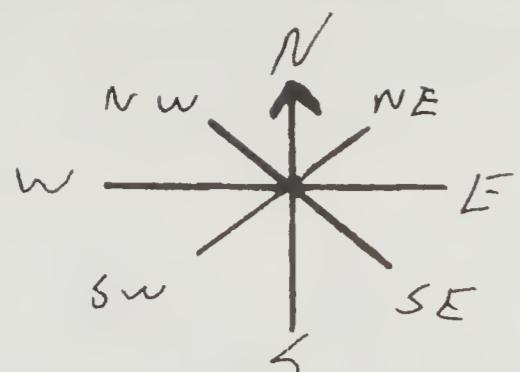
DATE 25 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0540	begin observations					
JFP 0625	Dark-rumped P	1	NE			
BWP 0636	Wedge-tail	1	SE		Dark.	
JFP 0656	Bonin's P	1	E			
BWP 0658	Shear-petrel	1	NE			
JFP 0701	Wedge-tail	1	N		Dark.	
JFP 0800	Shear-petrel	1	S			
JFP 0801	Dark-rumped P	1	SE			
P.W. 0822	Wedge-tail	1	SE		dark	
JFP 0845	White-necked	1	SE			
P.W. 0858	Dark-rumped P	1	E			
JFP 0902	Dark-rumped P	1	SE			
BWP 0904	Wedge-tail	3	NE		dark	
JFP 0907	Bonin Fr P	1	NW			
JFP 0910	Dark-rumped P	1	S			
JFP 0912	Dark-rumped P	2	N			
JFP 1100	Dark-rumped P	1	W			
JFP 1102	Dark-rumped P	1	NE			
JFP 1108	Dark-rumped P	1	NE			
JFP 1115	Wedge-tail	1	SW			
JFP 1117	Dark-rumped P	1	S			
JFP 1126	Shear-petrel	1			seen by watch	
JFP 1143	Dark-rumped P	1	NE			
JFP 1147	Dark-rumped P	1	NE		seen by watch	
JFP 1154	Dark-rumped P	1	SE			
JFP 1155	Shear-petrel	1			seen by watch	
JFP 1205	Shear-petrel	1	N			
BWP 1206	Bulwer's P.	1	N			
1211	Bonin's P.	1	N			
1216	Sooty Tern	2				
	shear-petrel	1				



DATE 25 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
JFP	1219	Dark-rumped	1	S		
JFP	1232	Dark-rumped P	1	NE		
JFP	1237	Dark-rumped P	3	SW		
JFP	1253	Dark-rumped P	2	NW		
		Shear-Petrel	1			
JFP	1304	Dark-rumped P	1	NW		
	1311	Shear-Petrel	1	NE		
	1314	Wedge-tail	1	NW	Dark.	
JFP	1315	Dark-rumped P	1	W		
Ref	1406	White-necked	1	W		
BWP	1410	Bonin Is P	1			
	1345	Wedge-tail	3			
JFP		Dark-rumped	4			
Par	1413	Bonin Is P	2	N		
JFP	1416	Dark-rump P.	1	NW		
JFP	1425	Dark-rump P	3	NW		
JFP	1430	Dark-rump P	4	NW		
	1433	Shear/Petrel E	1	NW		
BWP	1444	Bonin Is P	1	E	sitting	
SPP	1443	Dark-rump P.	1	NW		
JFP	1500	Dark-rumped P	12	(5)	feeding flock	
	1515	Sooty Tern	8			
JFP		Dark-rumped P	2	±10 65		
		Wedge-tail	4	±10 35		
JFP	1535	Dark-rumped	1	SW		
BWP	1553	Bonin Is P	1	W		
	1554	Wedge-tail	1	W	Dark	
	1600	Wedge-tail	2	NW	Dark.	
	1604	Shear-Petrel	1	NW		
BWP	1642	Bonin Is P	1	NW		
BWP	1700	Bonin Is P	1	NE		
JFP	1709	Dark-rumped P	1	NE		



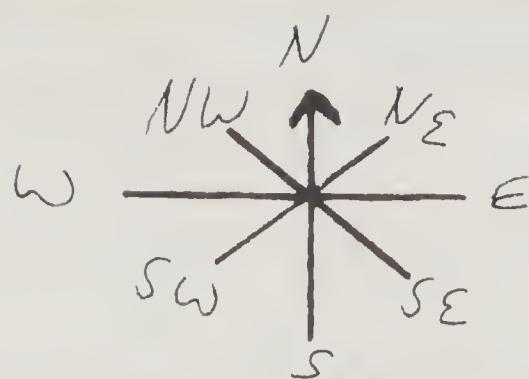
DATE 25 July 64
Pg. # 3

time species # dir. hgt. remarks

loc.

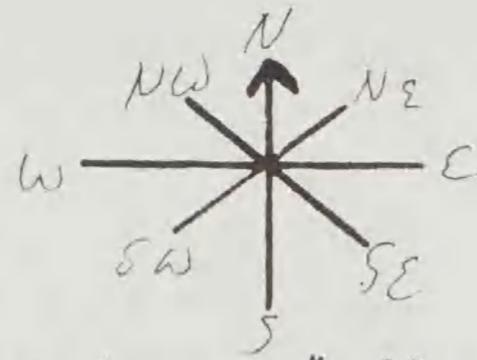
1718 Dark-winged P. 1 NW
1727 Dark-winged P. 1 SE
1830 and elsewhere

4
51
10
10
118
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204



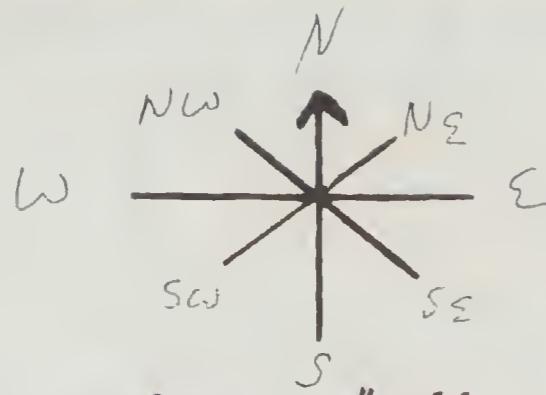
DATE 26 July 67
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0542	begin observations					
0548	Dark-rumped P.	1	W			
0554	Newell's S.	1	SW			
0609	Wedge-tail	1	SE			
0658	Dark-rumped P.	1	N		light	
0838	Bonin Is P	1	NW			
0840	Dark-rumped P	1	W			
0905	Shear-Petrel	1	NE			
0933	Shear-Petrel	1	NW		seen by match	
0938	Christmas Is S.	1	N		all dark, typical shearwater flight, stiff wingbeats and glide, slightly smaller than Wedgetail, tendency to sail high above horizon. Came very close. wings held stiff, not cocked like Wedgetail.	
1003	Bonin Is. P.	1	SW			
1024	Bonin Is P	1	W			
1029	Wedge-tail	1	S		dark	
1043	Dark-rumped	1	SE			
1055	Kermadec Petrel	1	N		white circular spots seen toward ends of underwings, typical petrel flight, medium - large all brown, chunky. Lighter brown below.	
1100	Sooty Tern	4	⑨			
1129	Dark-rumped P	1	NW			
1300	Dark-rump P	1	SE			
1325	Dark-rump P.	2	NW			
1354	Dark-rump P.	1	NE			
1606	Bonin Is P	1	NW			
1615	Dark-rumped P	1	S			
1636	Shear/petrel	1	N			
1637	Andubon's Shear? near fitz	1	SE		very small shearwater, smaller than Bonin's with thinner wings, not as chunky, dark grey brown above, white below, white underwing with thick dark edges. Flew with fast wingbeats, constant flapping	
1847	End Observations					
1900	Wedge-tail	2	N			



DATE 27 July 64
Pg. # 1

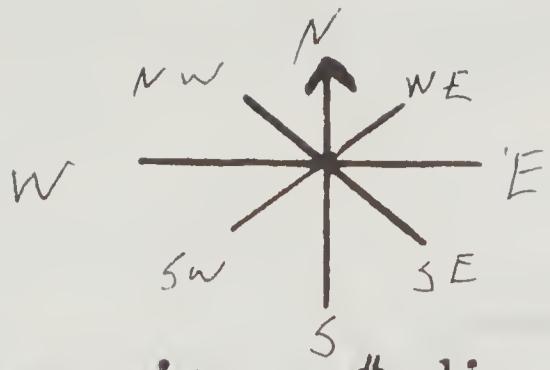
time	species	#	dir.	hgt.	remarks	loc.
0525	begin observations					
JFP 0728	Dark-rumped P	1	NW			
JFP 0750	Dark-rumped P	1	N			
JFP 1035	Dark-rumped P	1	W			
JFP 1115	Dark-rumped P	1	E			
JFP 1249	Dark-rumped P	1	NW			
1250	Sooty Tern	1	NW		immature	
1413	shear/petrel	1	NW			
1445	Red-tailed Tropicb.	1	(C)		sitting on water very pale	
JFP 1450	Dark-rumped P.	5+	(C)		feeding	
JFP 1500	Dark-rumped P.	3	(C)		I sailed at least to height of top of nest	
JFP 1505	Dark-rumped P.	1			sitting	
JFP 1507	Dark-rumped P.	1	S			
JFP 1530	Dark-rumped P	4	(C)		sitting	
JFP 1550	Dark-rumped P	1	NW			
JFP 1640	Dark-rumped P	4	E			
1650	shear-petrel	1	E			
JFP 1652	Dark-rumped P	1	S			
1653	shear/petrel	1	S		Seen by capt. All looks "smaller than wedge-tail", glided whole time seen, lighter brown patches under wings.	
JFP 1700	Dark-rumped P.	1	SE			
JFP 1705	Dark-rumped P	1	SE			
JFP 1711	Dark-rumped P	1	SE			
JFP 1726	Dark-rumped P	1	NE			
1800	shear/petrel	1	W			
JFP 1820	Dark-rumped P.	1	N			
P. 1826	White-necked P.	1	E			
1840	end observations					



DATE 28 July 69
Pg. # 1

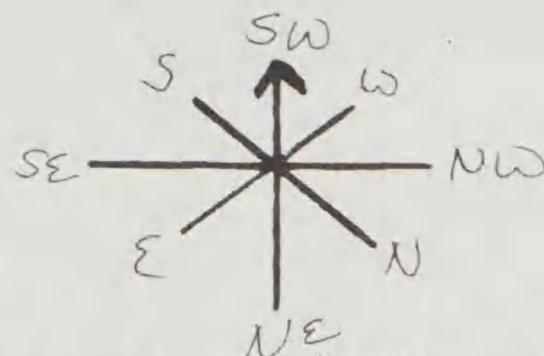
time	species	#	dir.	hgt.	remarks	loc.
0520	begin observations					
0555	Dark-rumped P. White-headed P. Petrel sp.	4 1 1			sitting same size & shape as Dark-rumps. Dark brown above, light brown below, lighter about head. Underwings dark brown around edges and light brown in middle. Flew like Dark-rump. Back splotchy, possibly molting	
0600	Petrel sp.	1	W		all dark petrel, slightly smaller than Wedgetail, typical petrel flight, underparts not clearly seen, but perhaps light patches underwings. sat once on water.	
0606	Dark-rump P.	1	NW			
0630	Dark-rump P. White-headed P.	5 1	Q		not feeding - 2 Dark-rumps put on aerial display, one chasing the other round & round, inches behind it.	
0632	Dark-rump P.	1	W			
0744	Petrel sp.	1	N			
0821	Dark-rumped P.	1	W			
0827	Shear. Petrel	1	N			
0849	Dark-rumped P.	2	N		sitting on water	
0912	Sooty Tern Dark-rumped P. Shearwater/ Petrel sp.	3 4 1	N		Feeding All dark, smaller than Wedgetail. Flew with fairly high arcs, flapped seldom. Flaps fairly stiff.	
0950	Shear/petrel	1				
0954	Fairy Tern	1	N		seen by - atch	
1020	R.T. Tropicbird	1	S			
1342	Shear/petrel	1	S			
1335	Dark-rump P.	2	SE			
1337	White-tailed Tropic	1				
1350	Dark-rumped P.	1				
1400	Sooty Terns Dark-rumped P. Kermadec Petrel Fairy Tern Shear. Petrel	50 25 2 1 1	S S S S S		crossed in front of San Benito at $\frac{1}{2}$ to $\frac{3}{4}$ mi. Feeding dark phase	
					size of Bonin Is P, but thinner, darker on back, more contrast. underwing white with black edges, undertail coverts white Audubon's S.?	

9
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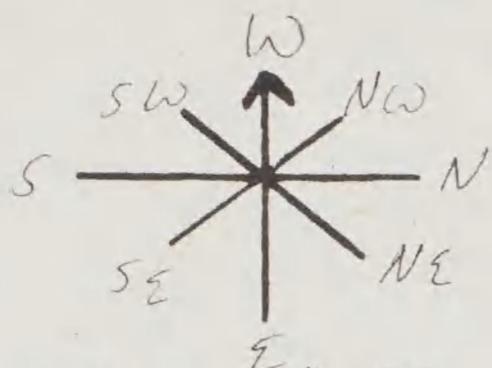
DATE 28 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1439	sooty Terns P. Petrel sp S. Shear-Petrel	15	± S		Dark sunned P. probably breeding	
1534	Dark sunned P.	1	W			
1630	Red-tailed Tropic b.	1	N			
1705 1738	Shear-petrel S. Shear/Petrel and albatrosses	2	W		way off, possibly flock	
1855		1				



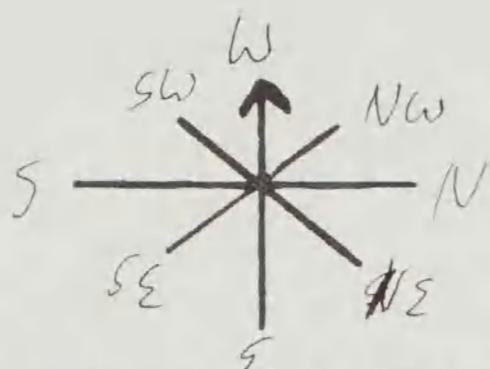
DATE 29 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0523	begin observations					
0735	Shear-Petrel	2	S			
0815	Sooty Tern	2	Ø		immature	
0850	Red-tailed Tropicb	1			sitting, pink	
0930	Red-tailed Tropicb	1			sitting, pink	
JFP 0949	Dark-rumped P	1	S			
1013	Fairy Tern	1	NW			
1222	Bulwer's P	1	S		Identified by Watch (Termitie)	
1240	Shear-Petrel	1	W			
1330	Red Tailed Tropicbird	1	N			
JFP 1547	Dark-rumped P	1	NE		Molting	
1627	Sooty Tern	2	S		1 adult, 2 immature	
1654	Shear-Petrel	1	S		Looked all dark, flew with like a Bonin Is P, didn't flap very often, Long distance off.	
1714	White-tailed Tropicb	1	Ø			
1810	Sooty Tern	150	±50			
	Shear/petrel	47	±20			
JFP	Dark-rump P.	3+				
1900	end observation					



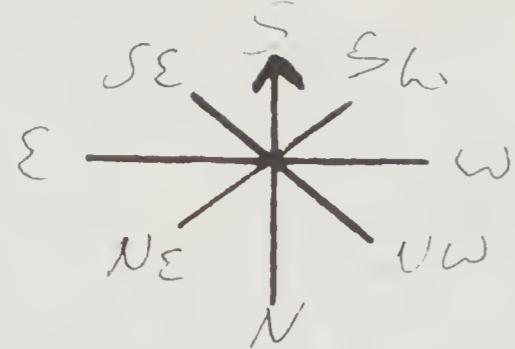
DATE 30 July 64
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
BWP	0525	shear/petrel Red-tailed Tropic	3			seen by watch	
	0555	begin observations					
	0615	Bonin TSP	1	N			
	0635	Red-tailed Tropicb	1	N			
	0637	Red-footed Booby	1	E			
	0650	Red-tailed Tropicb.	1	E			
	0810	W.T. Tropicbird	1	SE			
	0904	R.T. Tropicbird	1	②			
	1010	shear/petrel	1	-		seen by watch on far side of drogue at distance of 1.0 mi very small at that distance	
	1050	shear/petrel	1	SW			
	1605	White-tailed Tropic.	1	E			
	1655	Sooty Tern	5	E		travelling flock	
	1656	Bulwer's Petrel	1	S			
	1730	Tropicbird op	1	SW			
	1737	Bulwer's Petrel	1	SW			
	1905	End observations					



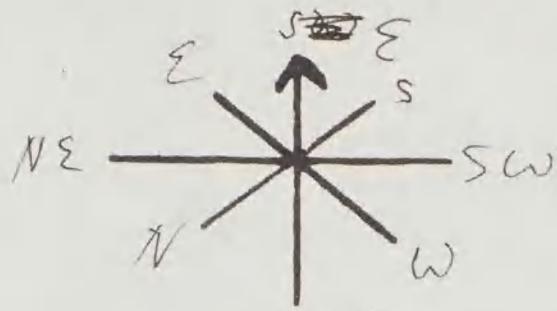
DATE 31 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0600	begin observations					
0522	Newells S	1	W		seen by Watch (Cormorant)	
0530	Newells S	1	W		seen by Watch	
0610	Boninbo P Wedge-tail	1	W		Light seen by Watch	
0715	Wedge-tail	1	SW		Light	
0718	Bulwer's Petrel	1	W			
0722	Newells S	1	NW			
0735	Wedge-tail	1	W		Light	
0850	4" squid (a small school of 10) jumped 3 ft out of water in front of boat					
0950	Shear-petrel	1	SW			
1050	Sooty Tern	10	W			
	Wedge-tail	7				
	Shear-petrel	3				
	Frigate	1				
1120	Red-tailed Tropicbird	1	②			
1158	Kermadec P.?	1	④ E		white probably sitting in water. all dark - white patches under wing - clumsy. Flapped very often flying into wind. underparts not clearly seen	
1230	Red-Tailed Tropicbird	1	E			
1333	Wedge-tail	1	NW		Light	
1500	Sooty Tern	25				
	Shear/petrel	5				
	Fairy Tern	1				
	Frigate	1				
1655	Fairy Tern	2	S			
1702	White-tailed Tropicbird	1	SE		not fair	
1725	shear/petrel	1	NW		white underparts including underwing + undertail, slightly smaller than Wedgetail, dark above, sharp contrast, flight petrel like arcs, but long and directional.	
1800	Newells S.	2	SW			
1814	Shear-petrel	1	SW			
1820	Frigate	2				
	Sooty Tern	3+			feeding flock at distance	



DATE 31 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1825	Shear/petrel	1	S W			
1842	Sooty Tern	2	S			
1930	Wedgetail	1			light	
1930	end observations					

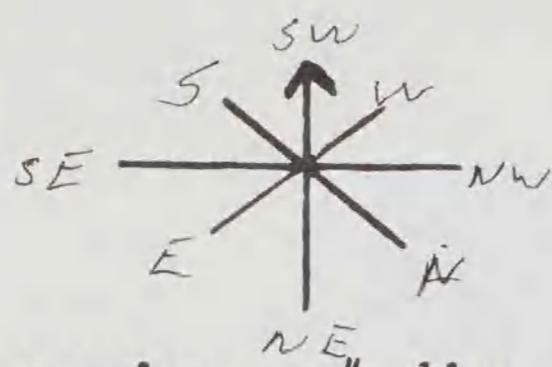


DATE 1 Aug 69
Pg. # 1

time species # dir. hgt. remarks

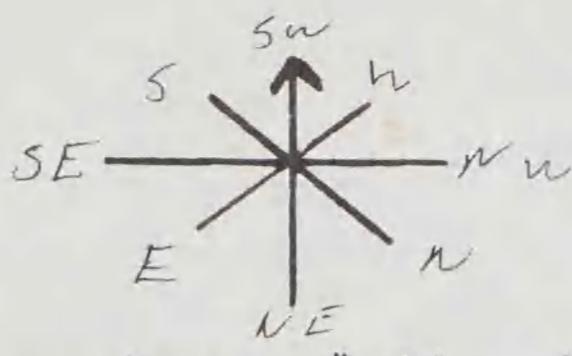
loc.

0605	begin observations				
0617	White-tailed Tropicb	1	NW		
0618	Sooty Tern	1	NW		
0622	Sooty Tern	1	NW		
0623	wedgetail	1	NW		
0625	Sooty Tern	1	Q		flight
0630	Newell's S.	2	N		
0632	Noddy Tern	1	NW		
0645	Sooty Tern	4	NW		no flock
	Noddy Tern	1			
0650	Noddy Tern	3	NW		no flock
	Sooty Tern	2	NW		
0652	Sooty Tern	1	NW		
0655	Noddy Tern	2	NW		
	Sooty Tern	2	NW		
0658	Sooty Tern	1	NW		
	Skar/petrel	2	NW		
0700	Red-tailed Tropicb	1			
0705	Wedgetail	1	NW		sitting
0708	Noddy Tern	1	N		light
0711	Sooty Tern	1	N		
0723	Noddy Tern	3	NW		
0725	Newell's S	1	W		
0729	Noddy Tern	2	NW		
0735	Noddy Tern	10	NW		
	Wedgetail	3	N		
0742	Noddy Tern	50	±5		travelling flock
	Sooty Tern	2			
	Wedgetail	7			
0752	Noddy Tern	1	N		
0755	Noddy Tern	1	W		
0800	Wedgetail	1	E		dark
0802	Wedgetail	1	W		light
0803	Common Noddy Tern	+	E		
0804	Wedgetail	1	W		
0805	Wedgetail	1	E		



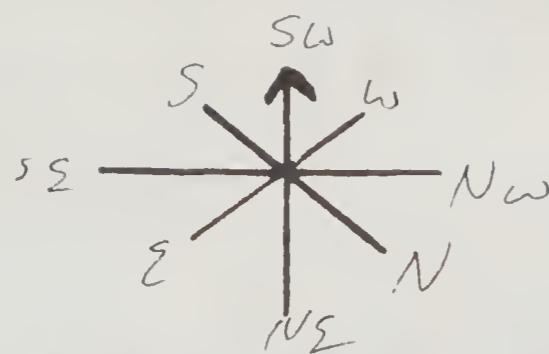
DATE 1 August 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0806	Noddy Tern	1	w			
0808	Wedgetail	1	w		Light	
0809	Wedgetail	1	SW		Light	
0810	Noddy Tern	3	w			
	Wedgetail	1			Light	
0811	Noddy Tern	2	w			
0813	Wedgetail	1	w		Light	
0814	Wedgetail	1	S		Light	
0816	Wedgetail	2	SW		Light	
0817	Noddy Tern	2	S			
0818	Wedgetail	2	w		Light	
0820	Noddy Tern	2	S			
0821	Wedgetail	1	w		Light	
0822	Noddy Tern	1	SW			
0823	Noddy Tern	1	S			
0824	Wedgetail	1	w		Light	
0825	R.T. Tropicbird	1	SE			
0827	Bulwer's P.	1	S			
0828	Wedgetail	2	w		Light	
0829	Noddy Tern	1	S			
0830	Wedgetail	1	NW		Light	
0832	Wedgetail	3	w		Light	
0833	Wedgetail	2	SW		Light	
0834	Wedgetail	1	NW		Light	
0835	Wedgetail	3	w		Light	
0836	Noddy Tern	3	w			
0837	Wedgetail	2	NW		Light	
0838	Noddy Tern	2	S			
0839	Wedgetail	2	NW		Light	
0840	Wedgetail	5	SW		Light	
0841	Noddy Tern	2	w			
0842	Wedgetail	2			Light	
0843	Wedgetails	5	NW		Travelling Flock	
	Booby, Red Foot	1				
0844	Wedgetail	5	SW		Not a Flock	
0846	Noddy Tern	2	w			
0847	Wedgetail	1	w		Light	
0848	Wedgetail	1	w		Light	
0849	Wedgetail	1	N		Light	
0850	Wedgetail	2	SW		Light	
0851	Bulwer's R.	1	S			



DATE 1 August 64
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
0852	Noddy Tern	1	SW			
0853	Bulwers	1	W			
0854	Wedge-tail	2	NW		Light	
0855	Noddy Tern	1	W			
0856	Wedge-tail	1	W		Light	
0858	Noddy Tern	1	W			
0900	Wedge-tail	2	W		Light	
0902	Wedge-tail	1	W		Light	
0903	Noddy Tern	1	NW			
0904	R.F. Booby	1	W			
0905	Wedge-tail	2	NW		Light	
0907	Noddy Tern	1	SW			
0908	Noddy Tern	5	W		Not a flock	
0910	Bulwers P	1	NW			
0911	Noddy Tern	3	S			
0912	Wedge-tail	2	NW		Light	
0913	Noddy Tern	1	N			
0915	Wedge-tail	1	W		Light	
0916	Wedge-tail	1	W		Light	
0918	Noddy Tern	1	S			
0920	R.F. Booby	1	W			
0922	Wedge-tail	1	NW		Light	
0923	Noddy Tern	1	NW			
0924	Noddy Tern	1	NW			
0925	Noddy Tern	1	NW			
0926	Wedge-tail	3	W		Light	
0927	Bulwers P	1	W		or	
0928	Wedge-tail	1	S		Light	
0929	Wedge-tail	2	W		Light	
0932	Noddy Tern	1	NW			
0940	Bulwers P	1	NW			
0941	Wedge-tail	1	SE		Light	
0942	Brown Booby	2	NW			
0943	Noddy Tern	8	NW			
0945	Wedge-tail	1	NW			
	Noddy Tern	3	NW			
0948	Sooty Tern	2				
	Noddy Tern	10	NW			
	Wedge-tail	1			Light not a flock	
0950	Noddy Tern	2	NW			
0953	Noddy Tern	1	SE			
0954	Noddy Tern	2	NW			
0955	Noddy Tern	60			feeding flock	



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time	species	#	dir.	hgt.	remarks	loc.
1000	Wedge-tail	2				
1002	Noddy Tern	4	SE			
1004	Noddy Tern	2	SE			
1008	Noddy Tern	2	SE			
1010	Sooty Tern	1	SE			
1013	Red-footed Booby	1	SE			
	Noddy Tern	1	SE			
1015	Red-footed Booby	1	SE			
	Noddy Tern	6	SE		not a flock	
1020	Sooty Tern	1	S			
	Noddy Tern	1	S			
1021	Noddy Tern	1	N			
1023	Noddy Tern	3	SW			
1024	Sooty Tern	3	NE			
1030	Noddy Tern	3			perched on small branch	
1034	Sooty Tern	2	S			
1036	Noddy Tern	1	S			
1037	Noddy Tern	1	N			
1042	Noddy Tern	1	E			
1104 69	End Observations					